



## **Section 42A Report to the District Plan Review Hearing Panel**

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### **Proposed Horowhenua District Plan Natural Hazards**

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**March 2013**



Hearing Date: 15 –16 April 2013  
Report Prepared by: Hamish Wesney  
Report Number: 7.01

## **NOTE TO SUBMITTERS**

Submitters should note that the hearings on the Proposed District Plan have been organised according to topic. A total of 14 hearings are scheduled to hear submissions on each of the 14 topics. The topic which is the subject of this report is Natural Hazards.

It is very likely that submitters who have made submissions in relation to Natural Hazards may have also made submissions on other parts of the Proposed Plan. This report only addresses those submissions that are relevant to the subject of this report.

The hearings of submissions to the Proposed District Plan are being collectively heard by a Panel of eight commissioners. The appointed commissioners include a mix of local Councillors and independent commissioners. In most cases each hearing will be heard by a panel of three commissioners selected from the eight panel members. This does mean that different commissioners will be sitting on different hearings. It therefore will require submitters to ensure that when speaking at a hearing that they keep to their submission points that have been covered by the Planning Report for that hearing.

To assist submitters in finding where and how their submissions have been addressed in this report, a submitter index has been prepared and can be found at the very end of the report. The index identifies the page number(s) of where the submitter's submission points have been addressed in the report.

Submitters may also find the table contained in Section 6.2 of this report helpful as it identifies the Reporting Officer's recommendation to the Hearing Panel on every submission point and further submission point addressed in this report.

## EXECUTIVE SUMMARY

The Operative Horowhenua District Plan (Operative Plan) has been operative for over 13 years (since 13<sup>th</sup> September 1999), and in November 2009, Horowhenua District Council (Council) resolved to undertake a full review of its Operative District Plan. A number of plan changes have been made to the Operative Plan addressing a wide range of issues. However, none of these plan changes directly related to natural hazards. Therefore, a review of all the natural hazards provisions in Operative Plan was undertaken.

As a result of this review, Chapter 8 of the Proposed Plan contains Issues, Objectives, Policies, Methods, Anticipated Environmental Results and associated explanations for natural hazards. Chapter 8 is effectively an updated and revised version of Section 8 in the Operative Plan following a review of these provisions. The Operative Plan does not contain any specific rules or information on the Planning Maps on natural hazards, therefore, the rules and hazard areas in the Proposed Plan are new. Specifically, the introduction of the Flood Hazard Overlay Area and associated rules is a new element of the Proposed Plan.

The changes to the natural hazard provisions comparing the Operative and Proposed Plans primarily derive from giving effect to Proposed One Plan. The Proposed One Plan contains directive policies on the approach to natural hazards, specifically, applying a regulatory approach to managing the risks from flooding.

Through the public notification process a number of submissions were received supporting and opposing various natural hazard provisions. These submissions have supported some provisions requesting they be adopted as proposed, while others have requested changes to the wording or deletion of specific changes.

The purpose of this report is to summarise the key issues raised in submissions and to provide advice to the District Plan Review Hearings Panel on the issues raised. All submission points have been evaluated in this report, with specific recommendations for each point raised within each submission. These recommendations include amendments to the Proposed Plan, including refinements to the wording of some provisions. Whilst recommendations are provided, it is the role of the Hearings Panel to consider the issues, the submissions received, the evidence present at the hearing, and the advice of the reporting planner before making a decision.

The main officer's recommendations on the key issues raised in submission include:

- Excluding non-habitable structures and activities for primary production activities from the permitted activities thresholds in the Flood Hazard Overlay Areas
- Providing for the undergrounding and other small-scale network utilities in the Flood Hazard Overlay Areas
- Retaining the extent of the Flood Hazard Overlay Areas
- Not adding to the Planning Maps at risk from liquefaction
- That Horowhenua District Council formally requests Horizons Regional Council to undertake flood modelling of the lower Manawatu River, Ohau River and any other waterbodies in the Horowhenua District where flood modelling has not been undertaken in the last five years. In addition, that the results of the flood modelling be provided to Horowhenua District Council within two years of the request.

The Hearings Panel will determine whether to accept, reject or accept in part, the submissions received, in making its decisions and as a consequence, any amendments to be made to the Proposed Plan.

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# 1. Introduction

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## 1.1 Qualifications

My full name is Hamish Philip Joseph Wesney, I am an Associate Principal: Senior Planner with Boffa Miskell Limited, a firm of consulting planners, ecologists, and landscape architects. I hold the qualifications of Bachelor of Resource and Environmental Planning (1st Class Hons). I am a Member of the New Zealand Planning Institute.

I have over 11 years' experience as a planner. In my first three and a half years in practice, I was employed as a planner with the Horowhenua District Council (HDC), undertaking a variety of planning tasks, including District Plan changes and processing numerous land use and subdivision resource consent applications.

For the past seven and a half years, I have been a consulting planner based in Wellington, and have been involved in advising a wide range of clients, including local authorities, developers, central government and individuals on various projects. In particular, I have been involved in a number of District Plan Reviews (full and rolling) for various local authorities on a range of resource management issues. For example, Horowhenua District Plan (2009-11: Proposed Plan Change 21 Urban Growth and Greenbelt Residential), Wairarapa Combined District Plan (2004 – 2011), Hutt City District Plan (2008 – ongoing on subdivision, Central Area, Petone) and Manawatu District Plan (2010 – ongoing). Therefore, I have a thorough understanding of the District Plan Review processes and requirements, and land use, development and resource management issues in the Horowhenua District.

At the beginning of 2011, Boffa Miskell was engaged by HDC to assist with the District Plan Review. This assistance included researching and evaluating issues and options for Plan provisions, drafting and reviewing Plan provisions for inclusion in the Proposed District Plan, attending Councillor workshops and meetings, and stakeholder consultation. This assistance also includes preparing and reviewing Section 42A (RMA) reports, including preparing this report.

## 1.2 Purpose

The purpose of this report is to assess the Proposed District Plan in terms of the relevant statutory considerations and obligations, taking into account those issues raised in submissions, and an analysis of the appropriateness and effectiveness of the proposed provisions on natural hazards in the Horowhenua District. I provide my findings and recommendations to the Hearings Panel in accordance with Section 42A of the Resource Management Act.

## 1.3 Outline

This report considers submissions and further submissions which were received on “Chapter 8 Natural Hazards” of the Proposed Horowhenua District Plan (referred to in this report as “the Proposed Plan”) and associated rules/standards and relevant information shown on the Planning Maps (e.g. Hazard Areas). This report has been prepared in accordance with Section 42(a) of the Resource Management Act (“the RMA”) to assist the Hearings Panel with its consideration of submissions received in respect of the provisions in these parts of the Proposed Plan.

This report is structured according to the following format:

- An overview of the Proposed Plan provisions in these sections/chapter

- Statutory Requirements
- Analysis of Submissions
- Recommended Amendments to Proposed Plan

The report discusses each submission or groups of similar submissions and includes a recommendation from the report writer on each submission that has received, **but the recommendation is not the decision of the Horowhenua District Council** (“the Council”).

Following consideration of all the submissions and supporting evidence, if any, presented by the submitters and further submitters at the hearing, the Hearings Panel will make a decision on the submissions. The decision report prepared by the Hearing Panel will include the Hearing Panel’s decision to accept, accept in part, or reject individual submission points, and any amendments to the Proposed Plan. All recommendations in this report are subject to consideration of any further evidence provided by submitters at the hearing.

The amendments to the Proposed Plan arising from the officer recommendations discussed throughout this report are listed in full in Section 6.2. The suggested amendments are set out in the same style as the Proposed Plan.

The Analysis of Submissions section has been structured by grouping submission points according to individual provisions in the Proposed Plan. As far as possible, the individual submission points are listed in order to match the contents of each Plan provision. The submission points relating to text or maps are listed first.

Each submission and further submission has been given a unique number (e.g. 58). Further submissions follow the same number format although they start at the number 500, therefore any submitter number below 500 relates to an original submission and any submitter number of 500 or higher relates to a further submission.

In addition to the submission number, each submission point (relief sought) has been given a unique number (e.g. 01). When combined with the submitter number, the submission reference number reads 58.01, meaning submitter number 58 and submission point number 01. A similar numbering system has been used for further submissions.

This report contains selected text from the Proposed Plan itself, either when changes have been requested by a submitter or where a change is recommended by Council officers or advisers. Where changes to the text are recommended in this report the following protocols have been followed:

- New additional text is recommended is shown as underlined (i.e. abcdefghijkl)
- Existing text is recommended to be deleted is shown as struck-out (i.e. ~~abcdefghijkl~~)

## **2. Proposed Horowhenua District Plan**

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### **2.1 Background**

In November 2009, Council resolved to undertake a full review of its Operative District Plan. Under Section 79 of the RMA, the Council is required to commence a review of its District Plan provisions which have not been reviewed in the previous 10 years. The Council has undertaken 23 District Plan changes since the District Plan was made operative in September 1999. These Plan Changes addressed a wide range of issues, with the most recent Plan Changes including rural subdivision,

urban growth, outstanding natural features and landscapes, and financial contributions. Whilst these Plan Changes covered a number of the provisions in the District Plan, many other provisions had not been changed or reviewed. Accordingly, the Council decided to do a full review of the rest of the District Plan, including the earlier Plan Changes. This review did not cover the most recent Plan Changes 20 – 22 which were not operative at the time the Proposed Plan was notified

Chapter 8 of the Proposed Plan contains Issues, Objectives, Policies, Methods, Anticipated Environmental Results and associated explanations for natural hazards. Chapter 8 is effectively an updated and revised version of Section 8 in the Operative Plan following a review of these provisions. The Operative Plan does not contain any specific rules or information on the Planning Maps on natural hazards, therefore, the rules and hazard areas in the Proposed Plan are new.

## 2.2 Consultation & Process

As outlined in the Section 32 Report associated with the Proposed Plan, general and targeted consultation has been undertaken for the District Plan Review from 2009. The general consultation was undertaken in two phases: 1. Survey and 2. Discussion Document (refer to the Section 32 Report for further details on the consultation approach and process).

In relation to natural hazards, the District Plan Review Discussion Document contained information on the flood risks and put forward questions and options to the community on how to best manage subdivision and development in flood risk areas.

The first question asked was:

*Should all development in high-risk flood areas be required to go through the resource consent process?*

The majority (93%) of respondents to this question said “yes”. Comments made in response to this question highlighted the negative impacts (social and financial) for residents and farmers from flood events, and the time and effort post the event to repair damage. Other responses highlighted the ability to avoid or mitigate the effects of flooding through constructing buildings with minimum floor levels, or avoid building in flood prone areas altogether. A few responses contended that development should not be restricted in flood risk areas, and that Council should provide advice and information on the flood risk, and leave it up to individual landowners to decide whether they are willing to accept the risks of developing in flood prone areas.

The second question asked was:

*Are there some activities and buildings within high risk flood areas that should not require resource consent? If so, what would these exemptions be and why are they not susceptible to the impacts of flooding and would not make a flood event worse for neighbouring properties?*

Over half (57%) of respondents to this question stated there should be no exemptions, as they considered all types of development should be properly assessed. However, a number of respondents considered there should be exemptions, with farming and flood protection structures being the two examples stated.

In addition to this general public consultation, targeted consultation has been undertaken with Horizons Regional Council (‘Horizons’) and Federated Farmers of New Zealand Inc. Horizons referred to the policies in the Proposed One Plan which provide direction to District Councils on controlling the effects of the use, development or protection of land for the avoidance or mitigation



of natural hazards. Federated Farmers of New Zealand Inc commented that the natural hazards provisions should be based on a risk assessment approach, whereby habitable buildings and other critical infrastructure should be restricted within hazard prone areas, but less sensitive activities and structures (e.g. non-habitable farm buildings) should be provided for where landowners are willing to accept the level of risk.

### **2.2.1 Late Submissions**

No late submissions were received which raised matters relating to Chapter 8 Natural Hazards and associated rules and standards.

## **3. Statutory Requirements**

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### **3.1 Resource Management Act 1991**

In preparing a District Plan, Council must fulfil a number of statutory requirements set down in the Resource Management Act, including:

- Part II, comprising Section 5, Purpose and Principles of the Act; Section 6, Matters of National Importance; Section 7, Other Matters; and Section 8, Treaty of Waitangi;
- Section 31, Functions of Territorial Authorities;
- Section 32, Duty to consider alternatives, assess benefits and costs;
- Section 72, Purpose of district plans
- Section 73, Preparation and change of district plans;
- Section 74, Matters to be considered by territorial authorities;
- Section 75, Contents of district plans

Below I have summarised the key matters from the above requirements which are particularly relevant to this report. Under Sections 30 and 31 of the RMA, Regional Councils and Territorial Authorities (e.g. District Councils) have shared responsibility for the avoidance or mitigation of natural hazards, with the Regional Policy Statement to provide direction and clarity on this shared responsibility (discussed further below). The relevant aspects of the above matters have been considered in the analysis of the submissions in Section 4 of this report.

### **3.2 Proposed Amendments to Resource Management Act**

Central government has initiated a reform of the Resource Management Act (RMA) with a focus on reducing delays and compliance costs. The reform is being undertaken in two phases. Phase 1 focused on streamlining and simplifying the RMA, including changes to the preparation of district plans. Phase 2 focuses on more substantive issues concerning freshwater, aquaculture, urban design, infrastructure and the Public Works Act. Work on Phase 1 commenced late in 2008, while work on Phase 2 commenced in mid-2009.

The Phase 1 work culminated in the Resource Management (Simplifying and Streamlining) Amendment Act 2009, which came into force in October 2009. In respect of the Horowhenua District Plan and the Proposed Plan, the main effect of this Amendment Act have been process related to the further submission process, ability for simplified decision reports and notices, and changes when rules have effect.

In terms of Phase 2, in December 2012 the Resource Management Reform Bill was introduced to Parliament for its first reading and was referred to the Local Government and Environment

Committee for submissions and consultation. In terms of District Plan Reviews and Proposed District Plans, this Bill propose changes in relation to the analysis that underpins District Plans including greater emphasis on the need for quantitative assessment of costs and benefits and the need to consider regional economic impact and opportunity costs, and ensuring decision-making is based on adequate, relevant, and robust evidence and analysis, and to increase the level of transparency of decision-making. It is noted this Bill includes transitional provisions which state these new assessment and decision-making requirements do not apply to proposed plans after the further submission period has closed (refer Schedule 2, Clause 2 of the Bill).

Central government is also considering further changes to the RMA which may include changes relating to natural hazards. A recent Technical Advisory Group report<sup>1</sup> reviewing Sections 6 and 7 of the RMA proposed the addition of “managing the significant risks associated with natural hazards” to a revised Section 6 to give greater recognition and direction on natural hazards. In February 2013, the government released a discussion document titled “improving our resource management system”. The purpose of this document is to obtain feedback on what are referred to as “critical roadblocks to more effective resource management and proposes some solutions”. One of the proposals relates to providing greater national consistency and guidance to improve the way that natural hazards are planned for and managed. Under the proposals, provisions would be made to ensure the risks of all natural hazards can be appropriately considered in resource consent decisions. At this time, the specific details of these potential changes are unknown. As this discussion document is a pre-cursor to any legislative or other policy changes, at this time, these proposals are not considered to have any weight in this hearing and decision-making process.

### **3.3 Local Government Act 2002**

The Local Government Act 2002 (LGA) is designed to provide democratic and effective local government that recognises the diversity of New Zealand communities. It aims to accomplish this by giving local authorities a framework and power to decide what they will do and how. To balance this empowerment, the legislation promotes local accountability, with local authorities accountable to their communities for decisions taken.

The LGA also provides local authorities to play a broad role in meeting the current and future needs of their communities for good-quality local infrastructure, local public services, and performance of regulatory functions. Under Section 11A of the LGA in providing core services and performing this role, Council must have particular regard to “the avoidance or mitigation of natural hazards”.

Section 14 of the LGA sets out the principles of local government with one of the principles stating:

*(h) in taking a sustainable development approach, a local authority should take into account—*

*(i) the social, economic, and cultural interests of people and communities; and*

*(ii) the need to maintain and enhance the quality of the environment; and*

*(iii) the reasonably foreseeable needs of future generations*

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<sup>1</sup> Report of the Minister for the Environment’s Resource Management Act 1991 Principles, Technical Advisory Group, February 2012, Ministry for the Environment.

The above role and principle generally align with the overall purpose and principles of the Resource Management Act.

### **3.4 Building Act 2004**

Building work is controlled under the Building Act 2004 and various building regulations including the Building Code. The purpose of the Building Act is to ensure that buildings:

- Are safe, sanitary and have suitable means of escape from fire
- Contribute to the physical independence and well being of people who use them
- Are designed, constructed and able to be used in ways that promote sustainable development

The regulations prescribe the Building Code with which all building work must comply. Performance standards that must be met include building:

- Durability
- Fire safety
- Sanitation (services and facilities)
- Moisture control
- Energy efficiency
- Access

In relation to natural hazards, Sections 72 and 73 of the Building Act impose certain obligations on the Council and property owners where an application is made for a building consent on land where natural hazards exist. Under Section 71 of the Building Act, natural hazard means “erosion (including coastal erosion, bank erosion, and sheet erosion); falling debris (including soil, rock, snow, and ice); subsidence; inundation (including flooding, overland flow, storm surge, tidal effects, and ponding); and slippage, such as the potential for flooding, rockfall, erosion, subsidence or land slippage”.

This definition highlights hazards, such as tsunamis or earthquakes, are not regarded as natural hazards under the Building Act. These other hazards, however, are considered natural hazards under the Resource Management Act 1991. Notwithstanding the above, the Building Act and Building Code set out requirements for natural hazard risks including:

- Require buildings to withstand certain loads, including those due to earthquake and wind and limit the probability of floods
- Prescribe a hazard factor which is used to determine design level earthquakes for specific locations in New Zealand according to the assessed risk from earthquakes
- Require foundations to have specific design where they are on ground subject to land instability, ground creep, subsidence, seasonal swelling and shrinking, changing ground water level, erosion, dissolution of soil in water and effects of tree roots.

In response to the Canterbury earthquakes, the Government and the Department of Building and Housing have made changes to the Building Code and are considering further changes. For example, the Building Code was amended in August 2011 in relation to liquefaction, and it now requires concrete slabs to be reinforced as this will reduce damage. Further changes under consideration include introducing building restrictions or requirements for extensive land remediation or deep foundations for specific subsoil types and areas at high earthquake risk.

### **3.5 New Zealand Coastal Policy Statement 2010**

Under Section 75(3)(b) of the Resource Management Act, a District Plan must give effect to any New Zealand Coastal Policy Statement (NZCPS). The NZCPS identifies a particular challenge as “activities in the coastal environment are susceptible to the effects of natural hazards such as coastal erosion and tsunamis, and those associated with climate change”.

The NZCPS contains a specific objective in relation to natural hazards which states:

#### *Objective 5*

*To ensure that coastal hazard risks taking account of climate change, are managed by:*

- locating new development away from areas prone to such risks;*
- considering responses, including managed retreat, for existing development in this situation; and*
- protecting or restoring natural defences to coastal hazards.*

To achieve this objective, the NZCPS contains specific policies on natural hazards as well as considerations in other policies. Attached in Appendix 3 are policies 24 – 27 of the NZCPS on natural hazards. These policies give direction on managing the risk of natural hazards in the coastal environment focusing on:

- (i) Identification of coastal hazards (Policy 24)
- (ii) Managing subdivision, use and development in areas of coastal hazard risk (Policy 25)
- (iii) Use natural defences against coastal hazards (Policy 26)
- (iv) Strategies for protecting significant existing development from coastal hazard risk (Policy 27)

How the District Plan gives effect to these policies is evaluated in the analysis in Section 4 of this report below.

### **3.6 National Environmental Standards**

No National Environmental Standards (NES) are specifically relevant to the subject of this report.

### **3.7 National Policy Statements**

Under Section 75(3)(a) of the Resource Management Act, a District Plan must give effect to any National Policy Statement (NPS). There are currently no NPS considered specifically relevant to the subject of this report.

### **3.8 Operative Regional Policy Statement & Proposed One Plan**

Under Section 74(2) of the Resource Management Act, Council shall have regard to any proposed regional policy statement, in this case, the Horizons Regional Council Proposed One Plan. In addition, under Section 75(3)(c) of the Resource Management Act, a District Plan must give effect

to any Regional Policy Statement. The Operative Manawatu-Wanganui Regional Policy Statement became operative on 18 August 1998. The Proposed One Plan (incorporating the Proposed Regional Policy Statement) was publicly notified on May 2007 and decisions on submissions notified in August 2010. 22 appeals were received, with some resolved through mediation while others were heard by the Environment Court. Interim decisions were issued by the Environment Court in August 2012 with final decisions expected in early 2013. In addition, Federated Farmers of NZ Inc and Horticulture NZ have appealed these interim decisions to the High Court in relation to non-point source discharges and run-off (nutrient management).

Given the very advanced nature of the Proposed One Plan in the plan preparation process and that all matters relevant to the District Plan Review are beyond challenge, the Proposed One Plan is considered the primary Regional Policy Statement and should be given effect to by the Proposed District Plan.

The Proposed One Plan contains a single objective for natural hazards which states:

***Objective 10-1: Effects of natural hazard events***

*The adverse effects of natural hazard events on people, property, infrastructure and the wellbeing of communities are avoided or mitigated.*

To achieve this objective, the Proposed One Plan contains a series of policies and methods (refer Appendix 4 for relevant policies). These policies direct the roles and responsibilities of Horizons and HDC, with HDC responsible for developing objectives, policies and methods (including rules) for the control of the use of land to avoid or mitigate natural hazards in all areas and for all activities, except in the coastal marine area, erosion protection works adjacent to the MWHS, and beds of lakes and rivers (under Policy 10-1). In addition, HDC is responsible for identifying floodways (as shown in Schedule I of the Proposed One Plan) and other areas known to be inundated by a 0.5% annual exceedance probability (AEP) flood event on planning maps in district plans, and controlling land use activities in these areas in accordance with Policies 10-2 and 10-4 of the Proposed One Plan. These policies are very directive in nature, particularly in relation to flood hazard, which is the most frequent and highest risk natural hazard in the region and district.

The relevant aspects of this policy direction are considered further below in the analysis of submissions.

### **3.9 Operative Horowhenua District Plan**

As noted above, Operative Horowhenua District Plan has been operative for over 13 years (since 13<sup>th</sup> September 1999) and a number of plan changes made. None of these plan changes directly addressed the subjects of this report (i.e. natural hazards). However, in preparing and considering Plan Changes 20 and 21 on rural subdivision and urban growth, the risks from natural hazards were a relevant consideration (e.g. in identifying new urban growth areas). Apart from these changes, no other changes have been made to the natural hazard provisions since the District Plan was made operative.

## 4. Analysis of Submissions

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### 4.1 Objective 8

#### 4.1.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
101.58	Director-General of Conservation (DoC)	In-Part	A new objective is required that will include future hazards thereby taking a precautionary approach and to recognise the need to manage hazards arising with climate change.	Include a new objective on future hazards or to that effect.	505.01 Powerco – In-Part

The Director-General of Conservation (DoC) (101.58) requests a new objective be added on future hazards to take a precautionary approach recognising climate change. Powerco (505.01) support in part this request, noting it does not mean all effects are to be avoided.

#### 4.1.2 Discussion & Evaluation

- Climate change and sea level rise may have an impact on the nature and extent of risk from flooding and coastal hazards (e.g. storm surges). Policy 8.1.13 in the Proposed Plan contains specific direction about managing the effects of natural hazards caused by climate change and sea level rise, both in terms of current and future hazards and development. Policy 8.1.13 is part of suite of policies to achieve Objective 8.1.1 on the risks and adverse effects of natural hazards. Objective 8.1.1 is considered to encompass both current and future hazard risks, and a new specific objective on future hazard is not considered to aid in achieving the purpose of the Act or giving effect to the Proposed One Plan or NZCPS. Therefore, it is recommended this submission point is rejected.

#### 4.1.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
101.58	505.01	Director-General of Conservation (DoC) Powerco	Support	Reject Reject

#### 4.1.4 Recommended Amendments to the Plan Provisions

No changes are recommended to Objective 8.

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## 4.2 Policies 8.1.2 – 8.1.14

### 4.2.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
101.60	Director-General of Conservation (DoC)	In-Part	Further policies are required to confirm the precautionary approach and to recognise the need to manage hazards arising with climate change.	Include two policies that ensure development locates outside known hazard areas, and recognising that the nature, location and extent of hazards will change as a result of continued climate change, and managing activities to minimise the potential impact of such changes or to that effect.	505.02 Powerco - In-Part
27.06	Horizons Regional Council	Support	Support Policy 8.1.2 and would like to stress that the areas identified do not necessarily cover all floodable areas within the district.	No specific relief requested. Inferred: Retain Policy 8.1.2.	
27.08	Horizons Regional Council	Support	Support Policy 8.1.3 and would like to stress that the areas identified do not necessarily cover all floodable areas within the district.	No specific relief requested. Inferred: Retain Policy 8.1.3.	
99.04	Transpower New Zealand Ltd	Support	The electricity transmission network often has operational and locational constraints and requirements. Transpower already has support structures within a natural hazard area identified on the District Planning Maps and there may be a requirement to locate a new tower or pole within a natural hazard area at some point in the future. In recognition of this, Transpower supports Policy 8.1.5 which recognises there may be a functional necessity to locate a structure within an identified hazard areas, and where this is the case the structure will be allowed. The relief sought would give effect to Policy 3 of the NPSET.	Retain Policy 8.1.5	505.03 Powerco - Support
27.09	Horizons Regional Council	Oppose	Oppose Policy 8.1.6 as it proposes that flood hazard avoidance is preferred to flood hazard mitigation.	Amend Policy 8.1.6 to be consistent with the POP:	

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			This is not aligned to the POP.	Flood hazard avoidance <del>is</del> <u>must be</u> preferred to flood hazard mitigation.	
99.05	Transpower New Zealand Ltd	Support	Transpower also supports the wording of Policy 8.1.8 which seeks to avoid, where practicable, the siting of new critical infrastructure and services within areas of significant risk from natural hazard events. Avoidance may not always be practicable because of location and operational constraints; however, Transpower's route, site and method selection process (NPSET Policy 4) will ensure adverse effects are avoided, remedied or mitigated.	Retain Policy 8.1.8	

DoC (101.60) requests the addition of two new policies that ensure development locates outside known hazard areas, and managing activities to minimise the potential impact of changes to natural hazards resulting from climate change. Powerco (505.02) support in part this request provided it does not mean all effects are to be avoided.

Horizons Regional Council (27.06 and 27.07) and Transpower New Zealand Ltd (99.04 and 99.05) support policies 8.1.2 and 8.1.3, and 8.1.5 and 8.1.8 respectively and seek they be retained.

#### 4.2.2 Discussion & Evaluation

1. The request from DoC to add two policies to confirm the precautionary approach and recognise the need to manage hazards arising with climate change are considered to be appropriately addressed in the Proposed Plan provisions (e.g. Policies 8.1.13 and 8.2.2). The identification of flood hazard areas and control of activities within these areas factor in climate change as directed by the Proposed One Plan policies and methods. For example, Method 10-2 of the Proposed One Plan states "A Region-wide study of areas prone to flooding, including consideration of sea level rise and climate change implications, will be carried out to update flood maps and information in order to assist Territorial Authorities in the development of district plans, and the Regional Council's advice service". This information is used as a basis for the Flood Hazard Areas in the Proposed Plan. Therefore, it is recommended this submission point is rejected.
2. The support for specific policies from submitters is noted with no changes sought or proposed, and these submission points are recommended to be accepted.

#### 4.2.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
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101.60	505.02	Director-General of Conservation (DoC) Powerco	Support in part	Reject Accept In-Part
27.06		Horizons Regional Council		Accept
27.08		Horizons Regional Council		Accept
99.04	505.03	Transpower New Zealand Ltd Powerco	Support	Accept Accept
27.09		Horizons Regional Council		Accept
99.05		Transpower New Zealand Ltd		Accept

#### **4.2.4 Recommended Amendments to the Plan Provisions**

Amend Policy 8.1.6 as follows:

“Flood hazard avoidance is must be preferred to flood hazard mitigation.”

### **4.3 Explanation & Principal Reasons for Objective 8.1.1**

#### **4.3.1 Submissions Received**

<b>Sub No.</b>	<b>Submitter Name</b>	<b>Support/ In-Part/ Oppose</b>	<b>Summary of Submission</b>	<b>Decision Requested</b>	<b>Further Submission</b>
67.15	Taiao Raukawa Environmental Resource Unit	In-Part	The submitter suggests that the top 10 hazards for the region are added and that Council undertake coastal processes research over the years and compile recent reports about coastal processes, seismic hazards\liquefaction risk for the Horowhenua coastline and make them more explicit for the community. Refer to submission for reference list of research reports.	Amend 8.1.1 Explanation & Principal Reasons by including list of top 10 hazards for the top 10 hazards for the greater Horizons Regional Council region are: <ul style="list-style-type: none"> <li>• Earthquake</li> <li>• Locally generated tsunami</li> <li>• Human pandemic</li> <li>• Volcanic activity at Mt Ruapehu</li> <li>• Sea level rise</li> <li>• Volcanic activity at Mt Egmont/Taranaki</li> <li>• Beach erosion and flooding</li> <li>• Flooding</li> <li>• Agricultural drought</li> <li>• Cyclones (tropical cyclones).</li> </ul>	

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
				And that make more explicit reference is made of coastal processes research for the community.	

Taiao Raukawa Environmental Resource Unit (67.15) requests listing the top 10 natural hazards in the Explanation and Principal Reasons section. In addition, they request Council compile recent research and reports on coastal processes and natural hazards (as listed in the submission).

#### 4.3.2 Discussion & Evaluation

1. It is understood the list of top 10 hazards was sourced from the Horizons Regional Council 'regional hazards' webpage<sup>2</sup>. This webpage states:

*In 2006 the Manawatu-Wanganui Civil Defence Emergency Management (CDEM) Group agreed on the top 10 hazards for the Region.*

*This analysis built on the hazard research undertaken to develop the CDEM Group Plan. The process used to identify the top 10 is called a SMUG analysis. This looks at identified hazards and addresses the seriousness of the risks associated with the hazard, the manageability of those risks, the urgency for addressing the risk, and the growth of the exposure to the risk.*

2. The Introduction text in Chapter 8 of the Proposed Plan describes the natural hazards in the Horowhenua District and the risks they pose to people and property. While this 'top 10 list' represents an agreed list on a regional-scale for civil defence and emergency management purposes, it is not considered appropriate to include in the District Plan for resource management purposes. As detailed in the Proposed One Plan, flooding is the principal natural hazard threat in the region (see 2<sup>nd</sup> paragraph, Section 10.1 Scope and Background, Chapter 10 Natural Hazards of Proposed One Plan).
3. Accordingly, it is recommended this submission point be accepted in part (e.g. reject adding top 10 list, accept compiling documents).

#### 4.3.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
67.15		Taiao Raukawa Environmental Resource Unit		Accept In-Part

#### 4.3.4 Recommended Amendments to the Plan Provisions

No changes are recommended to 8.1.1 Explanation & Principal Reasons.

<sup>2</sup> <http://www.horizons.govt.nz/keeping-people-safe/emergency-management/regional-hazards/>

## 4.4 Anticipated Environmental Result 8(d)

### 4.4.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
67.16	Taiao Raukawa Environmental Resource Unit	Support	Support Anticipated Environmental Result 8(d) and provides a list of references to provide in the Proposed Plan.	No specific relief requested.	

Taiao Raukawa Environmental Resource Unit (67.16) supports the Anticipated Environmental Result 8(d) on greater public awareness of natural hazards and refers to recent research and reports on coastal processes and natural hazards (as listed in the submission).

### 4.4.2 Discussion & Evaluation

- The support for Anticipated Environmental Result 8(d) is noted. I understand the research and reference documents in the submission have been compiled by Council. Accordingly, it is recommended this submission point be accepted.

### 4.4.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
67.16		Taiao Raukawa Environmental Resource Unit		Accept

### 4.4.4 Recommended Amendments to the Plan Provisions

No changes are recommended to Anticipated Environmental Result 8(d).

## 4.5 Chapter 8 General Matters

### 4.5.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
107.00	Rosalie Huzziff	In-Part	Horizons Regional Council has identified large areas of land, especially in the coastal area, which they believe would have liquefaction problems in the event of a major earthquake. They seem to have taken a broad brush approach to identifying areas rather than presenting a detailed assessment. The combination of high water tables and sandy soils	Include a Map which identifies the liquefaction high risk factor.	

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			<p>make potential liquefaction very real in the event of an earthquake. Long term planning for urban development in the Foxton area would indicate that the town should head in a northerly direction as this would move development towards lighter drier soils.</p> <p>A revision or urban expansion would, for the Foxton area, would upset plan change 20, 21 and 22 but it is better to require planners to revise their work than have to go through the type of heartache which the people of Christchurch went through.</p>		
11.26	Philip Taueki	In-Part	There is no reference to Lake Horowhenua becoming a natural hazard due to the toxic algal bloom that appears during the summer months, and which places at risk small children and animals.	<p>No specific relief requested.</p> <p>Inferred: Reference the algal bloom in Lake Horowhenua as a natural hazard in Chapter 8.</p>	519.21 Charles Rudd(Snr) - Support
11.27	Philip Taueki	In-Part	There is no reference to the liquefaction areas within the coastal environment.	<p>No specific relief requested.</p> <p>Inferred: Reference the liquefaction areas within the coastal environment in Chapter 8.</p>	519.22 Charles Rudd(Snr) - Support
60.19	Muaupoko Co-operative Society	In-Part	The submitter relies on the submission made by Philip Taueki for the following matters. There is no reference to Lake Horowhenua becoming a natural hazard due to the toxic algal bloom that appears during the summer months, and which places at risk small children and animals.	<p>No specific relief requested.</p> <p>Inferred: Reference the algal bloom in Lake Horowhenua as a natural hazard in Chapter 8.</p>	
60.21	Muaupoko Co-operative Society	In-Part	The submitter relies on the submission made by Philip Taueki for the following matters. There is no reference to the liquefaction areas within the coastal environment.	<p>No specific relief requested.</p> <p>Inferred: Reference the liquefaction areas within the coastal environment in Chapter 8.</p>	
98.30	Horticulture NZ	In-Part	Horticulture NZ recognises that there are flood prone areas within	No specific relief requested.	

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			the Horowhenua District, including the Moutoa Floodway, and that Council is seeking to take a proactive approach to managing potential risks, particularly through controls on the location of buildings and structures. This is an appropriate approach. It is also recognised that primary production activities are undertaken on much land that is identified as flood prone. It is important that existing primary production activities are able to be continued on such land.	Inferred: Amend Chapter 8 provisions to ensure that primary production activities are able to continue on land identified as flood prone.	
102.00	Christina Paton	In-Part	<p>There are no maps in the proposed District Plan on the liquefaction high risk factor that has been identified by Horizons Regional Council. Further, this information has not been included in the texts of this proposed District Plan and they are therefore perceived as being incomplete.</p> <p>Would like to see this proposal laid on the table until all relevant information has been provided for public consultation and that adequate explanation is supplied as to why this information was omitted according to instruction from the Horowhenua Councillors. Given that the Christchurch City Council is currently under duress because a similar omission was decided on in the past I fail to see why the Horowhenua District Council can justify a like omission.</p> <p>(See also Submission Point 102.01 - Planning Maps General)</p>	Include high risk areas of liquefaction on the Planning Maps. The Proposed Plan should remain on the table until all relevant information has been provided for public consultation.	

Rosalie Huzziff (107.00) and Christina Paton (102.00) request the addition of areas at high risk of liquefaction to the Planning Maps. Philip Taueki (11.27) and Muaupoko Co-operative Society (60.21) infers that reference be made to liquefaction areas within the coastal environment. Philip Taueki (11.26) and Muaupoko Co-operative Society (60.20) also infer reference should be made to Lake Horowhenua becoming a natural hazard due to the toxic algal bloom that appears during the summer months, and which places small children and animals at risk. Charles Rudd (Snr) (519.21 and 519.22) supports both submission points from Philip Taueki.

Horticulture NZ (98.30) comments on the approach to flood hazard areas, and infers relief sought to Chapter 8 provisions recognise that primary production activities are able to continue on land identified as flood prone.

#### **4.5.2 Discussion & Evaluation**

1. As stated in the Introduction to Chapter 8, liquefaction is one type of natural hazard that can result from seismic activity. Liquefaction is “the process in which strong ground shaking transforms saturated granular soils from a solid state into a heavy liquid mass, and thus loses strength and stiffness”<sup>3</sup>. The most susceptible soils are loose coarse silts and sands. The 2010 and 2011 Canterbury earthquakes highlighted the impacts and consequences posed by liquefaction. Since these earthquakes, various new or revised regulations and guidance have been produced (and are still under production) responding to the risks from seismic hazards, including liquefaction. While many of these regulations and guidance specifically relate to Canterbury, they are considered helpful in understanding and responding to liquefaction risks in the Horowhenua. Regulations and guidance of note include:
  - (a) *Just Add Water: When Should Liquefaction Be Considered in Land Use Planning?* GNS Science Miscellaneous Series No. 47, December 2012.
  - (b) *Review of liquefaction hazard information in eastern Canterbury, including Christchurch City and parts of Selwyn, Waimakariri and Hurunui Districts*, GNS Science for Environment Canterbury, December 2012.
  - (c) *Guidelines for the investigation and assessment of subdivisions on the flat in Canterbury - Minimum requirements for geotechnical assessment for land development ('flatland areas' of the Canterbury region)*, Department of Building and Housing, September 2012.
  - (d) *Compliance Document for New Zealand Building Code: Clause B1 – Structure*, Department of Building and Housing, as amended in August 2011.
2. The relief sought by Rosalie Huzziff (107.00) and Christina Paton (102.00) request the addition of areas at high risk of liquefaction to the District Plan Planning Maps. In responding to this request, it is necessary to understand the policy context for seismic hazards and how the identification of these areas could be used or applied.
3. As outlined in the introductory section of this report, the Proposed One Plan groups all types of natural hazards including seismic hazards (excluding flooding) into a single policy framework. Policy 10-5 requires territorial authorities to “manage future development and activities in areas susceptible to natural hazard events (excluding flooding) in a manner which ensure that any increase in risk to human life, property or infrastructure from natural hazard events is avoided where practicable, or mitigated where the risk cannot be practicably avoided”. The explanation associated with this policy states “Hazard avoidance is preferred to hazard mitigation because of the impacts on human life, property and infrastructure. Avoiding all hazards is difficult, however, because of their infrequency and the widespread nature of their effects”. Policy 10-4 on critical infrastructure and natural hazards is also relevant. The explanation to Policy 10-4 records that in some cases locating critical infrastructure in areas prone to natural hazards is unavoidable and refers to specific

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<sup>3</sup> <http://www.dbh.govt.nz/UserFiles/File/Publications/Building/Guidanceinformation/pdf/guide-canterbury-earthquake-revised.pdf>

examples including “roading and gas supplies in coastal areas regardless of tsunami risk, and infrastructure in settlements located on liquefaction zones.”

4. The Proposed Plan provides policy direction on seismic hazards in Policy 8.1.9. This policy states “ensure that all structures and activities are constructed so as to minimise material damage from seismic events”. The implementation of this policy relies on controls under the Building Act 2004 (e.g. New Zealand Building Code). The Building Act ensures buildings are designed and constructed to a minimum standard for the seismic risk of the particular locality. The NZ Building Code refers to an Earthquake Zones map in NZ Standard 4229:1999 (refer Appendix 5 for a copy of this map). This map shows the entire Horowhenua and lower North Island as within ‘Zone A’ – High. This zoning means the highest standard apply for building foundations and wall bracing due to the seismic risk, including liquefaction.
5. Notwithstanding the above approach, Council still has an obligation under Section 106 of the RMA in assessing subdivision applications where there are significant risks from natural hazards (e.g. erosion, falling debris, subsidence, slippage, or inundation). In my experience with HDC and other Councils, if a natural hazard is suspected, irrespective of the potential hazard being identified on the Planning Maps, the Councils seek information as part of assessing a plan change or subdivision application. This approach is recognised in the recent guidelines produced for the Canterbury region and is considered a prudent and appropriate approach in the Horowhenua.
6. The submitters may be aware of or are referring to a map produced by the Manawatu-Wanganui Region Civil Defence and Emergency Management Group as part of a Lifelines Report<sup>4</sup> (refer Appendix 6). The map in the Lifelines Report (titled “Risks and Responsibilities: Report of the Manawatu-Wanganui Lifelines Project”) is based on information and map contained in a research report<sup>5</sup> prepared by GNS for Horizons Regional Council.
7. Advice was sought from Horizons on the most recent information on liquefaction in the Horowhenua. Horizons have advised “the Lifelines Report is the most recent effort to consolidate regional level information on hazards in the region. The status of the report can be considered as the current source of consolidated data with the Lifelines Group acknowledging that more recent research has been undertaken on some hazards in some areas – notably flood hazard. An updated version of the report is on the Lifelines Advisory Group’s work programme”. In addition, Horizons advise “the focus for future hazard research is currently being investigated and the cost benefit of undertaking such work will be considered by Council in due course”.
8. Therefore, this liquefaction map is the currently best available information on liquefaction risk in the Horowhenua. This information is used as a source of information by emergency management planners and resource management planners on natural hazards in the region. For example, in requesting information from subdivision applicants.
9. Lastly, as indicated above, further regulations and guidance is anticipated on responding to seismic hazards, including liquefaction following the Canterbury earthquakes. For example, it

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<sup>4</sup> “Lifelines” are the network services of water, sewage, transport, power and communications which are essential to the functioning of a community.

<sup>5</sup> Dellow G.D., Coote T.P. and Beetham R.D. 1999 Hazard Analysis Manual Volume 2, Section 4D: Assessment of liquefaction induced ground failure susceptibility in the Manawatu-Wanganui Region, Horizons Regional Council Report 99/EXT/383, ISBN 1-877221-54-6.

is possible central government may make changes to the RMA (e.g. the recently released Discussion Document indicates such changes) and building regulations. Therefore, the Council may need to review this policy approach or implement other requirements (e.g. building controls), based on new guidance or statutory requirements.

10. Given the above, identifying on the Planning Maps the areas at high risk from liquefaction using the information from the Lifelines Report is not considered the most efficient or effective approach for implementing this policy. Therefore, the submission points on adding liquefaction areas to the Planning Maps are recommended to be rejected.
11. The relief sought by Philip Taueki (11.27) and Muaupoko Co-operative Society (60.21) adding reference to liquefaction in coastal areas is already considered to be provided for in Chapter 8 (see 3<sup>rd</sup> paragraph below heading 'Seismic Activity' on Page 8-3).
12. Philip Taueki (11.26) and Muaupoko Co-operative Society (60.20) infer reference should be made to Lake Horowhenua becoming a natural hazard due to the toxic algal bloom that appears during the summer months, and which places small children and animals at risk. It is considered the risks posed by blue-green algae to people who use Lake Horowhenua is a 'health risk' rather than a natural hazard. The responsibilities and mechanisms for managing these health risks are outside the jurisdiction of the RMA and District Plan, therefore, it is not considered appropriate to add reference to them in the District Plan and these submissions points (11.26 and 60.20) be rejected.
13. Primary production activities are recognised as a predominant activity in the rural environment, including areas subject to natural hazards, particularly flooding. The policy framework recognises the need to balance the use of land for primary production purposes while avoiding or mitigating the risks posed by natural hazards on people, property and the environment. For example, Policy 8.1.5 includes specific provision for a non-habitable structure or activity on production land. Therefore, the recognition sought by Horticulture NZ is considered to already be provided for and it is recommended this submission point be accepted in part.

#### **4.5.3 Reporting Officer's Recommendation**

<b>Sub. No</b>	<b>Further Sub. No.</b>	<b>Submitter Name</b>	<b>Further Submitter Position</b>	<b>Officer's Recommendation</b>
107.00		Rosalie Huzziff		Reject
11.26	519.21	Philip Taueki Charles Rudd(Snr)	Support	Reject Reject
11.27	519.22	Philip Taueki Charles Rudd(Snr)	Support	Reject Reject
60.19		Muaupoko Co-operative Society		Reject
60.21		Muaupoko Co-operative Society		Reject
98.30		Horticulture NZ		Accept In-Part



102.00		Christina Paton		Reject
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#### 4.5.4 Recommended Amendments to the Plan Provisions

No changes are recommended as a result of the submissions above.

## 4.6 Rules 15.1(j): Residential Zone – Permitted Activity List

### 4.6.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
27.18	Horizons Regional Council	In-Part	The submitter seeks expansion of this rule to recognise and provide for the wide range of activities within its river and drainage scheme areas which extend beyond the identified Flood Hazard Area Overlay. There is some concern that the wording of this rule could limit the ability of Regional Council to carry out its functions in all areas of its river and drainage scheme areas as permitted activities. The rule correctly refers to rules in the POP in relation to activities in the beds of lakes and rivers and adjacent land but there are now also controls in relation to setbacks from rivers generally.	Amend Rule 15.1(j)(ii):  Refer to rules in Horizons Regional Council's Proposed One Plan relating to activities in the bed of lakes and rivers, for land adjacent to rivers <del>zoned for river and flood control</del> , all land use activities...	
41.21	Powerco	Support	Submitter supports Rule 15.1(j)	Retain Rule 15.1(j) without modification	
108.20	HDC (Planning Department)	In-Part	The Proposed Plan contains rules which would require resource consent for the underground installation of network utilities such as pipes, lines and cables in the Flood Hazard Area. Given that the underground installation of these utilities would not result in any structures above ground that displace flood waters or would be at risk from a flood event the consent requirement would seem unduly onerous, particularly as it may be visually more acceptable to underground these utilities. The Plan should be amended to make	Amend Rule 15.1(j) as follows:  <u>(iii) Installation of underground network utilities.</u>	505.06 Powerco – In-Part 507.00 Chorus - Support 508.00 Telecom - Support 511.07 Horowhenua District Council (Community Assets Department) - In-Part

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			the installation of underground network utilities a permitted activity. There would need to be an associated requirement for the ground to be reinstated with no change to the contour so that there was no additional effect on flood water flow paths.		

Horizons Regional Council (27.18) supports the intent of Rule 15.1(j) but seeks the rule be amended to provide for soil conservation, erosion protection, river control or flood protection works outside of Flood Hazard Overlay Areas. In addition, Horizons seek clarification on the reference to rules in the Proposed One Plan.

Powerco (41.21) support Rule 15.1(j).

The HDC (Planning Department) (108.20) request an amendment to Rule 15.1(j) to permit the installation of underground network utilities. Powerco (505.06), Chorus (507.00), Telecom (508.00) and HDC (Community Assets Department) (511.07) all support this request to varying degrees.

#### **4.6.2 Discussion & Evaluation**

1. The first aspect of the Horizons Regional Council submission relates to providing for soil conservation, erosion protection, river control and flood protection works outside of the Flood Hazard Overlay Areas. The original intent of the policy and rule framework was to provide for these works outside the Flood Hazard Overlay Areas due to their functional role in protecting people and property from the risks of natural hazards. However, Rule 15.1(j) as worded could be read that it does not permit these works outside of the Flood Hazard Overlay Areas. Therefore, it is recommended a separate permitted activity is added to Rule 15.1 to clarify this matter. In addition, a minor re-wording of Rule 15.1(j) is recommended to clarify work is undertaken on “behalf” of Horizons rather than “supervised”. For consistency, it is recommended this change apply across all Zones and this submission point be accepted.
2. The second aspect of the Horizons submission on this rule is a request to clarify the reference to the One Plan, specifically the reference to land “zoned for river and flood control” purposes. This clarification is supported as no land is zoned for these purposes in the One Plan or Proposed Plan. For consistency, it is recommended this change apply across all Zones and this submission point be accepted.
3. The HDC (Planning Department) requests the installation of underground network utilities be added as a permitted activity. This request is supported by various network utility operators. As explained in the submission from the HDC (Planning Department), the Proposed Plan contains rules requiring network utilities to be placed underground. It is considered the underground installation of network utilities can be placed underground within Flood Hazard Overlay Areas without adversely affecting the flood flows, provided the ground is reinstated to the same level as prior to the works.
4. Powerco further submitted seeking the relief sought relate to “network utilities” and not just “underground lines”. This relief is supported, as all types of network utility if undergrounded

would avoid risks on the flood hazard. HDC (Community Assets Department) seek the additional words of “and associated structures”. These additional words are not considered necessary as any structures would form part of the utility itself.

5. Therefore, it is recommended a new permitted activity is added to Rule 15.1(j) and associated standard on reinstatement in Rule 15.6 and these submission points be accepted.

#### 4.6.3 Reporting Officer’s Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer’s Recommendation
27.18		Horizons Regional Council		Accept
41.21		Powerco		Accept
108.20		HDC (Planning Department)		Accept
	505.06	Powerco	In-Part	Accept
	507.00	Chorus	Support	Accept
	508.00	Telecom	Support	Accept
	511.07	HDC (Community Assets Department)	In-Part	Accept

#### 4.6.4 Recommended Amendments to the Plan Provisions

Add to Rules 15.1, 16.1, 17.1, 19.1 and 20.1 the following:

“(r) Soil conservation, erosion protection, river control or flood protection works undertaken by, or on behalf of Horizons Regional Council.”

Amend Rules 15.1(j)(i), 16.1(n)(i), 17.1(p)(i), 19.1(m)(i) and 20.1(g)(i) as follows:

“(i) Soil conservation, erosion protection, river control or flood protection works undertaken by, or on behalf supervised of Horizons Regional Council.”

Amend the second bullet point under Rules 15.1(j), 16.1(n), 17.1(p), 19.1(m) and 20.1(g) as follows:

- “Refer to rules in the Horizons Regional Council’s Proposed One Plan relating to activities in the bed of lakes and rivers, for land adjacent to rivers ~~zoned for river and flood control~~, all land use activities in the coastal marine area, coastal foredunes, areas with flood control and drainage schemes, and erosion protection works that cross or adjoin mean high water springs.”

Add to Rule 15.1(j) as follows:

- “(iii) Installation of underground network utilities.”

Add to Rule 15.6.14 as follows:

“(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.”

## 4.7 Rule 15.4(h): Residential Zone – Discretionary Activity List

### 4.7.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
41.26	Powerco	Support	Submitter supports Rule 15.4(h)	Retain Rule 15.4(h) without modification	

Powerco (41.26) supports Rule 15.4(h) for new network utilities as a discretionary activity within Flood Hazard Overlay Areas.

### 4.7.2 Discussion & Evaluation

1. The support for the above rule is noted.
2. As a consequential amendment to submissions on Rule 15.1(j) above regarding adding a new rule for the installation of underground network utilities, it is recommended a cross-reference is added to Rule 15.4(h) to refer to new Rule 15.1(j)(iii).

### 4.7.3 Reporting Officer’s Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer’s Recommendation
41.26		Powerco		Accept

### 4.7.4 Recommended Amendments to the Plan Provisions

Amend Rule 15.4(h)(ii) as follows:

“(ii) Any new network utilities (except installation of underground network utilities, above ground lines, network utility masts, and network utility cabinets/buildings which are a permitted activity under Rule 15.1(j)).

## 4.8 Rule 15.6.14: Residential Zone – Conditions for Permitted Activities (Flood Hazard Overlay Area)

### 4.8.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
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Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
78.19	Telecom New Zealand Ltd	In-Part	<p>As currently drafted the permitted activity conditions for flood hazard overlay areas would not provide for the linear utilities or small telecommunication cabinets as permitted activities.</p> <p>Telecom requests permitted activity status under the applicable permitted activity condition in each zone for lines (above and below ground), including any ancillary earthworks such as trenching, as well as network utility masts and building/cabinets not exceeding 5m<sup>2</sup> in floor area.</p>	<p>Amend Rule 15.6.14 so that the following are provided for as a permitted activity:</p> <ul style="list-style-type: none"> <li>• Underground lines</li> <li>• Above ground lines including support poles</li> <li>• Network utility masts</li> <li>• Network utility cabinets/buildings not exceeding 5m<sup>2</sup> GFA;</li> <li>• Ancillary earthworks to any of the above activities.</li> </ul>	505.07 Powerco - In-Part
79.19	Chorus New Zealand Ltd	In-Part	<p>As currently drafted the permitted activity conditions for flood hazard overlay areas would not provide for the linear utilities or small telecommunication cabinets as permitted activities.</p> <p>Chorus requests permitted activity status under the applicable permitted activity condition in each zone for lines (above and below ground), including any ancillary earthworks such as trenching, as well as network utility masts and building/cabinets not exceeding 5m<sup>2</sup> in floor area.</p>	<p>Amend Rule 15.6.14 so that the following are provided for as a permitted activity:</p> <ul style="list-style-type: none"> <li>• Underground lines</li> <li>• Above ground lines including support poles</li> <li>• Network utility masts</li> <li>• Network utility cabinets/buildings not exceeding 5m<sup>2</sup> GFA;</li> <li>• Ancillary earthworks to any of the above activities.</li> </ul>	
108.21	HDC(Planning Department)	In-Part	<p>The Proposed Plan contains rules which would require resource consent for the underground installation of network utilities such as pipes, lines and cables in the Flood Hazard Area. Given that the underground installation of these utilities would not result in any structures above ground that displace flood waters or would be at risk from a flood event the</p>	<p>Amend Rule 15.6.14 as follows:</p> <p><u>(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation</u></p>	507.01 Chorus - Support  508.01 Telecom - Support

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			consent requirement would seem unduly onerous, particularly as it may be visually more acceptable to underground these utilities. The Plan should be amended to make the installation of underground network utilities a permitted activity. There would need to be an associated requirement for the ground to be reinstated with no change to the contour so that there was no additional effect on flood water flow paths.	<u>has been completed and earthworks reinstated.</u>	

Telecom (78.19) and Chorus (79.19) seek the addition of various types of network utility structures as permitted activities. Powerco (505.07) supports the submission from Telecom, requesting the wording for ‘underground lines’ refers to ‘underground network utilities’.

The HDC (Planning Department) (108.21) requests an amendment to Rule 15.6.14 with a new condition for earthworks associated with installing underground network utilities. Chorus (507.01) and Telecom (508.01) support this request.

#### **4.8.2 Discussion & Evaluation**

1. The installation of underground network utilities was discussed and evaluated under Rule 15.1(j) above, where it was recommended these works be added as a permitted activity with associated condition on reinstating ground level to the same level as prior to the works being undertaken.
2. As discussed above for installing underground network utilities, some utilities have a functional requirement to within particular locations which is recognised in Policy 8.1.5. As highlighted in the submission by Powerco, linear infrastructure such as electricity lines and gas pipelines are unable to avoid crossing areas at risk from flooding. In locating these utilities in flood risk locations, it is important to ensure they do not worsen the flood impacts on other locations or activities.
3. Conversely, Policy 8.1.8 requires the avoidance, where practicable, of the siting of new critical infrastructure and services within areas of significant risk from natural hazard events. Critical infrastructure is defined in the Proposed One Plan and includes electricity substation, water supply, human sewage treatment, road and rail networks, and health care institutions. Electricity and telecommunication lines and poles are not considered critical infrastructure.
4. The Flood Hazard Overlay Areas cover relatively broad areas, such as Opiki and between Foxton and Shannon. Requiring resource consent for the network utilities across these broad areas which consist of relatively small footprint and form is not considered effective or efficient in achieving the objective for natural hazards. The small size and nature of above ground electricity transmission and telecommunication lines and masts are not considered to result in significant displacement of flood waters. In addition, these network utilities are not considered to be “critical infrastructure” in terms of the definition in the Proposed One Plan,

therefore Policy 10-4 of the Proposed One Plan is not relevant. Accordingly, it is recommended these submission points from Telecom and Chorus are accepted and new permitted activities added. It is recommended these works are added to Rule 15.1(j) as the list of permitted activities and not Rule 15.6.14 which are the conditions of permitted activities and these submission points be accepted.

### 4.8.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
78.19	505.07	Telecom New Zealand Ltd Powerco	In part	Accept Accept
79.19		Chorus New Zealand Ltd		Accept
108.21	507.01 508.01	HDC (Planning Department) Chorus Telecom	Support Support	Accept Accept Accept

### 4.8.4 Recommended Amendments to the Plan Provisions

Add to Rule 15.1(j) the following:

(iv) New above ground lines including support poles

(v) New network utility masts

(vi) New network utility cabinets/buildings;

Add to Rule 15.6.14 as follows:

“(d) Within a Flood Hazard Overlay Area, new network utility cabinets/buildings shall not exceed 5m<sup>2</sup> gross floor area.”

## 4.9 Rules 16.1(n): Industrial Zone – Permitted Activity List

### 4.9.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
41.22	Powerco	Support	Submitter supports Rule 16.1(n)	Retain Rule 16.1(n) without modification	
108.22	HDC (Planning Department)	In-Part	The Proposed Plan contains rules which would require resource consent for the underground installation of network utilities such as pipes, lines and cables in the	Amend Rule 16.1(n) as follows: <u>(iii) Installation of underground network</u>	505.08 Powerco – In-Part 507.02 Chorus - Support

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			Flood Hazard Area. Given that the underground installation of these utilities would not result in any structures above ground that displace flood waters or would be at risk from a flood event the consent requirement would seem unduly onerous, particularly as it may be visually more acceptable to underground these utilities. The Plan should be amended to make the installation of underground network utilities a permitted activity. There would need to be an associated requirement for the ground to be reinstated with no change to the contour so that there was no additional effect on flood water flow paths.	<u>utilities.</u>	508.02 Telecom - Support

Powerco (41.22) support Rule 16.1(n).

The HDC (Planning Department) (108.22) request an amendment to Rule 15.1(j) to permit the installation of underground network utilities. Powerco (505.08), Chorus (507.02) and Telecom (508.02) all support this request to varying degrees.

#### 4.9.2 Discussion & Evaluation

1. The HDC (Planning Department) requests the installation of underground network utilities be added as a permitted activity to the Industrial Zone. This request is the same as that evaluated earlier in this report relating to the Residential Zone. It is considered similar circumstances apply in the Industrial Zone to the Residential Zone, therefore, the same evaluation and recommendations apply as above. It is recommended a new permitted activity is added to Rule 16.1(n) and associated standard on reinstatement in Rule 16.6 and these submission points be accepted.

#### 4.9.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
41.22		Powerco		Accept
108.22	505.08	HDC (Planning Department) Powerco	In-Part	Accept Accept In-Part
	507.02	Chorus	Support	Accept
	508.02	Telecom	Support	Accept



#### 4.9.4 Recommended Amendments to the Plan Provisions

Add to Rule 16.1(n) as follows:

- “(iii) Installation of underground network utilities.”

Add to Rule 16.6.19 as follows:

“(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.”

### 4.10 Rule 16.4(e): Industrial Zone – Discretionary Activity List

#### 4.10.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
41.27	Powerco	Support	Submitter supports Rule 15.4(e)	Retain Rule 16.4(e) without modification	

Powerco (41.27) supports Rule 16.4(e) for new network utilities as a discretionary activity within Flood Hazard Overlay Areas.

#### 4.10.2 Discussion & Evaluation

1. The support for the above rule is noted.
2. As a consequential amendment to submissions on Rule 16.1(n) above regarding adding a new rule for the installation of underground network utilities, it is recommended a cross-reference is added to Rule 16.4(e) to refer to new Rule 16.1(n)(iii) and this submission pointed be accepted.

#### 4.10.3 Reporting Officer’s Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer’s Recommendation
41.27		Powerco		Accept

#### 4.10.4 Recommended Amendments to the Plan Provisions

Amend Rule 16.4(e)(ii) as follows:

“(ii) Any new network utilities (except installation of underground network utilities, above ground lines, network utility masts, and network utility cabinets/buildings which are a permitted activity under Rule 16.1(j)).

## 4.11 Rule 16.6.19: Industrial Zone – Conditions for Permitted Activities (Flood Hazard Overlay Area)

### 4.11.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
78.20	Telecom New Zealand Ltd	In-Part	<p>As currently drafted the permitted activity conditions for flood hazard overlay areas would not provide for the linear utilities or small telecommunication cabinets as permitted activities.</p> <p>Telecom requests permitted activity status under the applicable permitted activity condition in each zone for lines (above and below ground), including any ancillary earthworks such as trenching, as well as network utility masts and building/cabinets not exceeding 5m<sup>2</sup> in floor area.</p>	<p>Amend Rule 16.6.19 so that the following are provided for as a permitted activity:</p> <ul style="list-style-type: none"> <li>• Underground lines</li> <li>• Above ground lines including support poles</li> <li>• Network utility masts</li> <li>• Network utility cabinets/buildings not exceeding 5m<sup>2</sup> GFA;</li> <li>• Ancillary earthworks to any of the above activities.</li> </ul>	505.09 Powerco - In-Part
79.20	Chorus New Zealand Ltd	In-Part	<p>As currently drafted the permitted activity conditions for flood hazard overlay areas would not provide for the linear utilities or small telecommunication cabinets as permitted activities.</p> <p>Chorus requests permitted activity status under the applicable permitted activity condition in each zone for lines (above and below ground), including any ancillary earthworks such as trenching, as well as network utility masts and building/cabinets not exceeding 5m<sup>2</sup> in floor area.</p>	<p>Amend Rule 16.6.19 so that the following are provided for as a permitted activity:</p> <ul style="list-style-type: none"> <li>• Underground lines</li> <li>• Above ground lines including support poles</li> <li>• Network utility masts</li> <li>• Network utility cabinets/buildings not exceeding 5m<sup>2</sup> GFA;</li> <li>• Ancillary earthworks to any of the above activities.</li> </ul>	
108.23	HDC (Planning Department)	In-Part	<p>The Proposed Plan contains rules which would require resource consent for the underground installation of network utilities such as pipes, lines and cables in the</p>	<p>Amend Rule 16.6.19 as follows:</p> <p><u>(c) Within a Flood Hazard Overlay Area, the installation of</u></p>	507.03 Chorus - Support  508.03 Telecom -

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			Flood Hazard Area. Given that the underground installation of these utilities would not result in any structures above ground that displace flood waters or would be at risk from a flood event the consent requirement would seem unduly onerous, particularly as it may be visually more acceptable to underground these utilities. The Plan should be amended to make the installation of underground network utilities a permitted activity. There would need to be an associated requirement for the ground to be reinstated with no change to the contour so that there was no additional effect on flood water flow paths.	<u>underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.</u>	Support

Telecom (78.20) and Chorus (79.20) seek the addition of various types of network utility structures as permitted activities. Powerco (505.09) supports the submission from Telecom, requesting the wording for 'underground lines' refers to 'underground network utilities'.

The HDC (Planning Department) (108.23) requests an amendment to Rule 16.6.19 with a new condition for earthworks associated with installing underground network utilities. Chorus (507.03) and Telecom (508.03) support this request.

#### 4.11.2 Discussion & Evaluation

1. The same submissions were made on the Residential Zone were evaluated earlier in this report. It is considered similar circumstances apply in the Industrial Zone to the Residential Zone, therefore, the same evaluation and recommendations apply as above. It is recommended new permitted activities be added to Rule 16.1 and associated standard in Rule 16.6 and these submission points be accepted.

#### 4.11.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
78.20	505.09	Telecom New Zealand Ltd Powerco	In part	Accept Accept In-Part
79.20		Chorus New Zealand Ltd		Accept
108.23	507.03 508.03	Horowhenua District Council (Planning Department) Chorus	Support Support	Accept Accept Accept

		Telecom		
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#### 4.11.4 Recommended Amendments to the Plan Provisions

Add to Rule 16.1(n) the following:

(iv) New above ground lines including support poles

(v) New network utility masts

(vi) New network utility cabinets/buildings;

Add to Rule 16.6.19 as follows:

“(d) Within a Flood Hazard Overlay Area, new network utility cabinets/buildings shall not exceed 5m<sup>2</sup> gross floor area.”

## 4.12 Rules 17.1(p): Commercial Zone – Permitted Activity List

### 4.12.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
41.23	Powerco	Support	Submitter supports Rule 17.1(p)	Retain Rule 17.1(p) without modification	
108.24	HDC(Planning Department)	In-Part	The Proposed Plan contains rules which would require resource consent for the underground installation of network utilities such as pipes, lines and cables in the Flood Hazard Area. Given that the underground installation of these utilities would not result in any structures above ground that displace flood waters or would be at risk from a flood event the consent requirement would seem unduly onerous, particularly as it may be visually more acceptable to underground these utilities. The Plan should be amended to make the installation of underground network utilities a permitted activity. There would need to be an associated requirement for the ground to be reinstated with no change to the contour so that there was no additional effect on flood water flow paths.	Amend Rule 17.1(p) as follows:  <u>(iii) Installation of underground network utilities.</u>	505.10 Powerco – In-Part 507.04 Chorus - Support 508.04 Telecom - Support

Powerco (41.23) support Rule 17.1(p).

The HDC (Planning Department) (108.24) request an amendment to Rule 17.1(p) to permit the installation of underground network utilities. Powerco (505.10), Chorus (507.04) and Telecom (508.04) all support this request to varying degrees.

#### 4.12.2 Discussion & Evaluation

1. The HDC (Planning Department) requests the installation of underground network utilities be added as a permitted activity to the Commercial Zone. This request is the same as that evaluated earlier in this report relating to the Residential Zone. It is considered similar circumstances apply in the Commercial Zone to the Residential Zone, therefore, the same evaluation and recommendations apply as above. It is recommended a new permitted activity is added to Rule 17.1(p) and associated standard on reinstatement in Rule 17.6 and these submission points be accepted.

#### 4.12.3 Reporting Officer’s Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer’s Recommendation
41.23		Powerco		Accept
108.24		HDC(Planning Department)		Accept
	505.10	Powerco	In-Part	Accept In-part
	507.04	Chorus	Support	Accept
	508.04	Telecom	Support	Accept

#### 4.12.4 Recommended Amendments to the Plan Provisions

Add to Rule 17.1(p) as follows:

- “(iii) Installation of underground network utilities.”

Add to Rule 17.6.21 as follows:

“(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.”

### 4.13 Rule 17.4(g): Commercial Zone – Discretionary Activity List

#### 4.13.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
41.28	Powerco	Support	Submitter supports Rule 17.4(g)	Retain Rule 17.4(g) without modification	

Powerco (41.28) supports Rule 17.4(g) for new network utilities as a discretionary activity within Flood Hazard Overlay Areas.

#### 4.13.2 Discussion & Evaluation

1. The support for the above rule is noted.
2. As a consequential amendment to submissions on Rule 17.1(p) above regarding adding a new rule for the installation of underground network utilities, it is recommended a cross-reference is added to Rule 17.4(g) to refer to new Rule 17.1(p)(iii).

#### 4.13.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
41.28		Powerco		Accept

#### 4.13.4 Recommended Amendments to the Plan Provisions

Amend Rule 17.4(g)(ii) as follows:

- “(ii) Any new network utilities (except installation of underground network utilities, above ground lines, network utility masts, and network utility cabinets/buildings which are a permitted activity under Rule 17.1(p)).

### 4.14 Rule 17.6.21: Commercial Zone – Conditions for Permitted Activities (Flood Hazard Overlay Area)

#### 4.14.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
78.21	Telecom New Zealand Ltd	In-Part	<p>As currently drafted the permitted activity conditions for flood hazard overlay areas would not provide for the linear utilities or small telecommunication cabinets as permitted activities.</p> <p>Telecom requests permitted activity status under the applicable permitted activity condition in each zone for lines (above and below ground), including any ancillary earthworks such as trenching, as well as network utility masts and building/cabinets not exceeding 5m<sup>2</sup> in floor area.</p>	<p>Amend Rule 17.6.21 so that the following are provided for as a permitted activity:</p> <ul style="list-style-type: none"> <li>• Underground lines</li> <li>• Above ground lines including support poles</li> <li>• Network utility masts</li> <li>• Network utility cabinets/buildings not exceeding 5m<sup>2</sup> GFA;</li> </ul>	505.11 Powerco - In-Part

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
				<ul style="list-style-type: none"> <li>Ancillary earthworks to any of the above activities.</li> </ul>	
79.21	Chorus New Zealand Ltd	In-Part	<p>As currently drafted the permitted activity conditions for flood hazard overlay areas would not provide for the linear utilities or small telecommunication cabinets as permitted activities.</p> <p>Chorus requests permitted activity status under the applicable permitted activity condition in each zone for lines (above and below ground), including any ancillary earthworks such as trenching, as well as network utility masts and building/cabinets not exceeding 5m<sup>2</sup> in floor area.</p>	<p>Amend Rule 17.6.21 so that the following are provided for as a permitted activity:</p> <ul style="list-style-type: none"> <li>Underground lines</li> <li>Above ground lines including support poles</li> <li>Network utility masts</li> <li>Network utility cabinets/buildings not exceeding 5m<sup>2</sup> GFA;</li> <li>Ancillary earthworks to any of the above activities.</li> </ul>	
108.25	Horowhenua District Council (Planning Department)	In-Part	<p>The Proposed Plan contains rules which would require resource consent for the underground installation of network utilities such as pipes, lines and cables in the Flood Hazard Area. Given that the underground installation of these utilities would not result in any structures above ground that displace flood waters or would be at risk from a flood event the consent requirement would seem unduly onerous, particularly as it may be visually more acceptable to underground these utilities. The Plan should be amended to make the installation of underground network utilities a permitted activity. There would need to be an associated requirement for the ground to be reinstated with no change to the contour so that there was no additional effect on flood water flow paths.</p>	<p>Amend Rule 17.6.21 as follows:</p> <p><u>(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.</u></p>	<p>507.05 Chorus - Support</p> <p>508.05 Telecom - Support</p>

Telecom (78.21) and Chorus (79.21) seek the addition of various types of network utility structures as permitted activities. Powerco (505.11) supports the submission from Telecom, requesting the wording for ‘underground lines’ refers to ‘underground network utilities’.

The HDC (Planning Department) (108.25) requests an amendment to Rule 17.6.21 with a new condition for earthworks associated with installing underground network utilities. Chorus (507.05) and Telecom (508.05) support this request.

#### 4.14.2 Discussion & Evaluation

1. The same submissions were made in relation to the Residential Zone and were evaluated earlier in this report. It is considered similar circumstances apply in the Commercial Zone to the Residential Zone, therefore, the same evaluation and recommendations apply as above. It is recommended new permitted activities be added to Rule 17.1 and associated standard in Rule 17.6 and these submission points be accepted.

#### 4.14.3 Reporting Officer’s Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer’s Recommendation
78.21	505.11	Telecom New Zealand Ltd Powerco	In part	Accept Accept In-Part
79.21		Chorus New Zealand Ltd		Accept
108.25	507.05 508.05	HDC(Planning Department) Chorus Telecom	Support Support	Accept Accept Accept

#### 4.14.4 Recommended Amendments to the Plan Provisions

Add to Rule 17.1(p) the following:

(iv) New above ground lines including support poles

(v) New network utility masts

(vi) New network utility cabinets/buildings;

Add to Rule 17.6.21 as follows:

“(d) Within a Flood Hazard Overlay Area, new network utility cabinets/buildings shall not exceed 5m<sup>2</sup> gross floor area.”



## 4.15 Rules 19.1(m): Rural Zone – Permitted Activity List

### 4.15.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
32.19	NZ Pork Industry Board	Support	Support primary production activities being a permitted activity.	Retain intent of Rule 19.1(m).	506.65 Ernslaw One Ltd - Support  513.04 Rayonier New Zealand Ltd - Support
41.24	Powerco	Support	Submitter supports Rule 19.1(m)	Retain Rule 19.1(m) without modification	
96.29	Federated Farmers of New Zealand	In-Part	<p>Support is given for the provision of primary activities as permitted within the Flood Hazard Overlay Areas. However, there is some confusion when this permitted status interacts with Condition 19.6.11 and the definition of Primary Production Activities which makes the permitted status seem not so favourable.</p> <p>Common understanding of primary production activities would include earthworks and buildings which are vital for farming such as tracking, digging silage pits, and buildings for equipment storage or for livestock, and it would seem that these are permitted under Rule 19.1 (m). However, Condition 19.6.11 limits earthworks to only 20m<sup>3</sup> and buildings to only 40m<sup>2</sup>, which would mean that many normal activities associated with primary production would need resource consent. This is compounded by the definition of Primary Production Activities which doesn't seem to be as to whether this includes activities ancillary to production – like earthworks and buildings.</p> <p>Federated Farmers submits that the logical solution to this would be to specify that activities ancillary to primary production like earthworks and buildings are included within the definition of Primary Production</p>	Amend Rule 19.1(m) by permitting earthworks and buildings that are associated with primary production within Flood Hazard Overlays.	513.16 Rayonier New Zealand Ltd - Support  517.22 Horticulture New Zealand – In-Part

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			Activities.		
99.24	Transpower New Zealand Ltd	Support	The maintenance and minor upgrading of existing network utilities in the flood overlay areas is also a permitted activity (19.1(m)). These provisions are supported by Transpower, as is reference to the NESETA regulating activities involving the operation, maintenance, upgrading, relocation, or removal of an existing transmission line (rather than the District Plan).	Retain Rule 19.1(m).	516.14 Federated Farmers of New Zealand - Oppose
108.26	HDC (Planning Department)	In-Part	The Proposed Plan contains rules which would require resource consent for the underground installation of network utilities such as pipes, lines and cables in the Flood Hazard Area. Given that the underground installation of these utilities would not result in any structures above ground that displace flood waters or would be at risk from a flood event the consent requirement would seem unduly onerous, particularly as it may be visually more acceptable to underground these utilities. The Plan should be amended to make the installation of underground network utilities a permitted activity. There would need to be an associated requirement for the ground to be reinstated with no change to the contour so that there was no additional effect on flood water flow paths.	Amend Rule 19.1(m) as follows:  <u>(iii) Installation of underground network utilities.</u>	505.12 Powerco – In-Part 507.06 Chorus - Support 508.06 Telecom - Support 516.15 Federated Farmers of New Zealand - Oppose

NZ Pork (32.19), Powerco (41.24) and Transpower support Rule 19.1(m) and seek it be retained. The Powerco submission is supported by Ernslaw One (506.65) and Rayonier (513.04). Federated Farmers (516.14) oppose the submission from Transpower.

Federated Farmers (96.29) seek an amendment to Rule 19.1(m) to permit earthworks and buildings that are associated with primary production within Flood Hazard Overlays. Rayonier (513.16) and Horticulture NZ (517.22) support this submission.

The HDC (Planning Department) (108.26) request an amendment to Rule 19.1(m) to permit the installation of underground network utilities. Powerco (505.12), Chorus (507.10) and Telecom

(508.10) all support this request to varying degrees, while Federated Farmers (516.15) oppose this submission.

#### 4.15.2 Discussion & Evaluation

1. The support for Rule 19.1(m) is noted from some submitters.
2. In relation to primary production activities within the Flood Hazard Overlay Areas, the intent of Rule 19.1(m)(i) is to permit these activities (e.g. grazing and cropping), including associated earthworks and buildings. However, limits are placed on the scale of earthworks and scale and type of buildings (through conditions in Rule 19.6.11) due to the adverse effects these works and structures can have on flood flows. The original intent of this rule was to give effect to Policy 10-2 in the Proposed One Plan which is to “not allow the establishment of any new structure or activity, or an increase in the scale of any existing structure or activity, within an area that is likely to be inundated in a 0.5% AEP (1 in 200 year) flood event”. In addition, Policy 10-2 includes an exception for this requirement for “the structure or activity is on production land”.
3. In discussing giving effect to these policies with Horizons staff, they advise Policy 10-2 has been the subject of mediation. Horizons advise the following in relation to structures and activities on production land within areas inundated in a 1 in 200 year flood event:

*“Non-habitable structures or activities on production land are excluded from the required flood hazard mitigation levels set out in the policy. Horizons interprets a non-habitable structure on production land as including any structure where people will not sleep, on land used for horticulture, agriculture, pastoral farming, forestry, etc.*

*Despite the exclusion of these structures and activities from the policy, Horizons recommends that any new structures on production land where people will be working should be designed and built with raised floor levels as set out in Policy 10-2 (d) (showing amendments agreed in mediation that are currently before the Court as consent orders highlighted in grey):*

*(ia) ensure that occupied structures have a finished floor or ground level, which includes reasonable freeboard, above the 0.5% AEP (1 in 200 year) flood level.*

- (i) *ensure that in a 0.2% AEP (1 in 500 year) 0.5% AEP (1 in 200 year) flood event the inundation of ~~occupied structures~~<sup>^</sup> and access between from occupied structures<sup>^</sup> and a safe area where evacuation may be carried out (preferably ground that will not be flooded) must be no greater than 0.5 m above finished ground level with a maximum water velocity of 1.0 m/s, or some other combination of water depth and velocity that can be shown to result in no greater risk to human life, infrastructure<sup>^</sup> or property\*.*

*The policy says that activities and non-habitable structures associated with primary production in flood-prone areas do not have to achieve avoidance or mitigation of the effects of a 0.5% AEP event. Horizons considers that if HDC added an exclusion to 19.6.11 such as “...or to non-habitable structures or activities on production land”, the rule would still give effect to Policy 10-2.*

*It would be useful to include a definition for ‘non-habitable structure on production land’, such as “a structure where people will not sleep, on land used for horticulture, agriculture, pastoral farming, forestry, etc”.*

4. Given this advice from Horizons, it is considered appropriate to add an exception for earthworks and non-habitable buildings associated with primary production activities. Therefore, it is recommended this submission point is accepted.
5. The HDC (Planning Department) requests the installation of underground network utilities be added as a permitted activity to the Rural Zone. This request is the same as that evaluated earlier in this report relating to the Residential Zone. As discussed above, some utilities have a functional requirement to within particular locations which is recognised in Policy 8.1.5. As highlighted in the submission by Powerco, linear infrastructure such as electricity lines and gas pipelines are unable to avoid crossing areas at risk from flooding. In locating these utilities in flood risk locations, it is important to ensure they do not worsen the flood impacts on other locations or activities.
6. Conversely, Policy 8.1.8 requires the avoidance, where practicable, of the siting of new critical infrastructure and services within areas of significant risk from natural hazard events. Critical infrastructure is defined in the Proposed One Plan and includes electricity substation, water supply, human sewage treatment, road and rail networks, and health care institutions. Electricity and telecommunication lines and poles are not considered critical infrastructure.
7. The Flood Hazard Overlay Areas cover relatively broad areas, such as Opiki and land between Foxton and Shannon. Requiring resource consent for network utilities which consist of relatively small footprints and form across these broad areas is not considered effective or efficient in achieving the objective for natural hazards. For installing underground lines and other utilities, provided the ground is reinstated to the same level as existed prior to the works, there would be no discernible effect on flood flows. For above ground structures, the small size and nature of above ground electricity transmission and telecommunication lines and masts are not considered to result in significant displacement of flood waters. The concerns expressed by Federated Farmers regarding the impact of new network utilities on privately owned land are acknowledged. However, this impact is considered a civil matter between the landowner and network utility operator and not a matter to be addressed in the District Plan.
8. Accordingly, it is recommended new permitted activities be added to Rule 19.1(m) and associated condition in Rule 19.6.11 and the submission points be accepted.

#### **4.15.3 Reporting Officer’s Recommendation**

<b>Sub. No</b>	<b>Further Sub. No.</b>	<b>Submitter Name</b>	<b>Further Submitter Position</b>	<b>Officer’s Recommendation</b>
32.19		NZ Pork		Accept
	506.65	Ernslaw One Ltd	Support	Accept
	513.04	Rayonier New Zealand Ltd	Support	Accept
41.24		Powerco		Accept

96.29		Federated Farmers of New Zealand		Accept
	513.16	Rayonier New Zealand Ltd	Support	Accept
	517.22	Horticulture NZ	In-Part	Accept In-part
99.24		Transpower New Zealand Ltd		Accept
	516.14	Federated Farmers of New Zealand	Oppose	Reject
108.26		HDC (Planning Department)		Accept
	505.12	Powerco	In-Part	Accept In-part
	507.12	Chorus	Support	Accept
	508.06	Telecom	Support	Accept
	516.15	Federated Farmers of New Zealand	Oppose	Reject

#### 4.15.4 Recommended Amendments to the Plan Provisions

Add to Rule 19.1(m) as follows:

- “(iv) Installation of underground network utilities.”

Amend Rule 19.6.11 as follows:

##### Exceptions:

- (i) ~~Except~~ The above two standards (a) and (b) do not apply to any soil conservation and river/flood control works carried out by or on behalf of Horizons Regional Council.
- (ii) Non-habitable structures/buildings or activities for primary production activities. For the purposes of this rule, “non-habitable” means a structure where people will not sleep.

Add to Rule 19.6.11 as follows:

- “(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.”

## 4.16 Rule 19.4.8: Rural Zone – Discretionary Activity List

### 4.16.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
7.01	Heirs Partnership	Oppose	Oppose rule which restricts buildings within the Flood Hazard Area. Unless the Flood Hazard Area boundaries are highly accurate this rule is unjustified and	Amend Planning Maps to accurately identify perimeters of the Flood Hazard Area or confine the application of Rule 19.4.8 to areas with a	

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			oppressive.	known flood history or incontestable high risk.	
41.29	Powerco	Support	Submitter supports Rule 19.4.8	Retain Rule 19.4.8 without modification	
98.38	Horticulture New Zealand	In-Part	Rule 19.4.8 (a) (iv) makes the use of hazardous substances a discretionary activity in a flood hazard area. That would mean that a farmer or grower could not use agrichemicals or apply fertiliser in these areas without getting a discretionary consent. It is accepted that storage of such substances presents a risk, but inclusion of 'use' is inappropriate in terms of risk management.	Amend Rule 19.4.8.(a)(iv) by either:  (a) Any activity within the Flood Hazard Overlay Areas (excluding Moutoa Floodway) that is not listed as a permitted or controlled activity, including but not limited to the following:  ...  (iv) Any activity involving <del>use</del> , storage or disposal of hazardous substances.  OR  Provide an exemption for use as part of primary production activities.	516.16 Federated Farmers of New Zealand - Support

Heirs Partnership (7.01) request Rule 19.4.8 be amended so it only relates to areas with a known flood history or un-contestable high flood risk, unless the boundaries of the proposed Flood Hazard Overlay Area are highly accurate.

Powerco (41.29) supports Rule 19.4.8 for new network utilities as a discretionary activity within Flood Hazard Overlay Areas.

Horticulture NZ (98.38) request Rule 19.4.8 be amended to provide for the 'use' of hazardous substances within the Flood Hazard Overlay Area. This submission is supported by Federated Farmers (516.16).

#### **4.16.2 Discussion & Evaluation**

1. The submission from Heirs Partnership contests Rule 19.4.8 insofar as the accuracy of the Flood Hazard Overlay Areas, the level of flood risk, and the imposition of restricting building and other activities. The accuracy of the Flood Hazard Overlay Area is discussed later in this report in the section on Planning Maps.
2. The activities and works listed in Rule 19.4.8 (e.g. habitable buildings, subdivision of land, hazardous substances and visitor accommodation) are vulnerable to the impacts of flooding. New dwellings and visitor accommodation in flood hazard areas would increase exposure of people and property to the risks of flooding and result in economic and social costs. Rule 19.4.8 requires a resource consent for these activities as a discretionary activity (meaning

consent could be granted or declined). The resource consent process provides for a case-by-case assessment of the proposed activity or works (e.g. dwelling). This assessment would consider the nature of flooding (e.g. depth, velocity, length of time of floodwaters) as well as any proposed mitigation measures (e.g. minimum floor level, safe evacuation route, etc). Given the number of variables in this assessment, the resource consent process is considered the most appropriate mechanism. In addition, the mapping of flood hazard areas and regulatory approach gives effect to the policies in the Proposed One Plan. Therefore, it is recommended Rule 19.4.8 be retained and this submission point be rejected.

3. In relation to hazardous substances within Flood Hazard Overlay Areas, it is acknowledged that the use and storage of hazardous substances is a common part of normal farming practice. However, with the use and storage of hazardous substances, in the event of a flood occurring, there is potential of contamination of land and/or water from a spill. It is considered this risk of contamination should be prevented or avoided as far as practicable.
4. Notwithstanding this risk, the flood hazard areas cover relatively broad areas, particularly rural land. Managing the 'use' of hazardous substances across this broad area by requiring a resource consent is considered inefficient, in that it could unduly limit the productive use of rural land and impose significant compliance costs.
5. The main risk of contamination occurring during a flood is from the storage of hazardous substances. It is considered that controlling the storage of hazardous substances in an area identified as being subject to a natural hazard is a responsible method of risk mitigation. The provisions do not prevent a resource consent application being made to store hazardous substances in an identified flood hazard area. Such an application will enable an appropriate assessment to ensure that the proposed location and storage facilities are appropriate to mitigate and prevent risk of contamination in the event of the flood occurring. Therefore, it is recommended the submission from Horticulture NZ is accepted and Rule 19.4.8 is amended by removing reference to 'use'.
6. The support from Powerco for Rule 19.4.8 is noted. As a consequential amendment to submissions on Rule 19.1(m) above regarding adding a new rule for the installation of underground network utilities, it is recommended a cross-reference is added to Rule 19.4.8 to refer to new Rules 19.1(m).

#### **4.16.3 Reporting Officer's Recommendation**

<b>Sub. No</b>	<b>Further Sub. No.</b>	<b>Submitter Name</b>	<b>Further Submitter Position</b>	<b>Officer's Recommendation</b>
7.01		Heirs Partnership		Reject
41.29		Powerco		Accept
98.38	516.16	Horticulture NZ Federated Farmers of New Zealand	Support	Accept Accept

#### **4.16.4 Recommended Amendments to the Plan Provisions**

Amend Rule 19.4.8(iv) as follows:

“(iv) Any activity involving use, storage or disposal of hazardous substances.”

Amend Rule 19.4.8(a)(ii) as follows:

“(ii) Any new network utilities (except installation of underground network utilities, above ground lines, network utility masts, and network utility cabinets/buildings which are a permitted activity under Rule 19.1(m)).

## 4.17 Rules 19.4.9 and 19.6.10: Rural Zone – Discretionary Activity List and Conditions of Permitted Activity (Moutoa Floodway)

### 4.17.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
99.29	Transpower New Zealand Ltd	In-Part	Incorporate Rule 19.6.10 into 19.4.9 to simplify the District Plan	Amend Rule 19.4.9 Discretionary Activity (Moutoa Floodway) so that the 19.6.10 Permitted Activity condition (Moutoa Floodway) is incorporated into the Discretionary Activity rule.	

Transpower (99.29) requests amend Rule 19.4.9 to incorporate Rule 19.6.10 (conditions of permitted activity).

### 4.17.2 Discussion & Evaluation

1. Rule 19.1(m) lists the permitted activities within Flood Hazard Overlay Areas, including the Moutoa Flooding. The listed permitted activities are:
  - (a) *Primary production activities.*
  - (b) *Soil conservation, erosion protection, river control or flood protection works undertaken by, or supervised by, the Horizons Regional Council.*
  - (c) *Maintenance or minor upgrading of existing network utilities.*
2. Rule 19.6.10 contains the conditions of permitted activities for the Moutoa Floodway which states “no earthworks, buildings or structures are permitted in the Moutoa Floodway”. Rule 19.4.9 lists discretionary activities for the Moutoa Floodway which states:
  - (a) *Any permitted activity within the Moutoa Floodway that does not comply with the permitted activity conditions in Rule 19.6.10.*
  - (b) *Any buildings, structures and activities within the Moutoa Floodway that are not listed as a permitted activity.*
  - (c) *Any subdivision of land within the Moutoa Floodway.*



3. Rule 19.6.10 (a) relates to permitted activities which propose earthworks, buildings or structures (e.g. new building for a primary production activity). Rule 19.6.10 (b) relates to all other activities which are not listed in Rule 19.1(m) (e.g. industrial or commercial activity). To clarify the application of these rules, it is recommended Rule 19.4.8(b) be amended as detailed below and this submission point be accepted in part.

#### 4.17.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
99.29		Transpower New Zealand Ltd		Accept In-Part

#### 4.17.4 Recommended Amendments to the Plan Provisions

Amend Rule 19.4.8(b) as follows:

- “(b) Any activities (including buildings, and structures) ~~and activities~~ within the Moutoa Floodway that are not listed as a permitted activity under Rule 19.1(m).”

### 4.18 Rule 19.6.11: Rural Zone – Conditions for Permitted Activities (Flood Hazard Overlay Area)

#### 4.18.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
7.02	Heirs Partnership	Oppose	Oppose rule which restricts earthworks within the Flood Hazard Area. Unless the Flood Hazard Area boundaries are highly accurate this rule is unjustified and oppressive. Even with a high level of accuracy there will be areas identified where earthworks are most unlikely to cause a problem.	Amend Planning Maps to accurately identify perimeters of the Flood Hazard Area or confine the application of Rule 19.6.11 to areas where it is known that earthworks could create significant flood problems.	
77.07	Higgins Group Holdings Limited	Oppose	Oppose Rule 19.6.11 as it unnecessarily restricts potential Aggregate Extraction activities from land near rivers and streams, which is where the majority of such activities are currently located and are likely to be located in the foreseeable future.  Aggregate Extraction activities within the bed of a river require resource consent from Manawatu-Wanganui Regional Council where	Delete Rule 19.6.11  If not deleted, request to amend Rule 19.6.11 [Exception ] as follows:  (a)....  (b)....  Except, the above two standards (a) and (b) do not apply to any soil conservation and river/flood control works	506.42 Ernslaw One Ltd - Support

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			the effects on flood hazards are assessed.	carried out by or on behalf of Horizons Regional Council <u>or to any Aggregate Extraction activities.</u>	
78.22	Telecom New Zealand Ltd	In-Part	<p>As currently drafted the permitted activity conditions for flood hazard overlay areas would not provide for the linear utilities or small telecommunication cabinets as permitted activities.</p> <p>Telecom requests permitted activity status under the applicable permitted activity condition in each zone for lines (above and below ground), including any ancillary earthworks such as trenching, as well as network utility masts and building/cabinets not exceeding 5m<sup>2</sup> in floor area.</p>	<p>Amend Rule 19.6.11 so that the following are provided for as a permitted activity:</p> <ul style="list-style-type: none"> <li>• Underground lines</li> <li>• Above ground lines including support poles</li> <li>• Network utility masts</li> <li>• Network utility cabinets/buildings not exceeding 5m<sup>2</sup> GFA;</li> <li>• Ancillary earthworks to any of the above activities.</li> </ul>	505.13 Powerco - In-Part
79.22	Chorus New Zealand Ltd	In-Part	<p>As currently drafted the permitted activity conditions for flood hazard overlay areas would not provide for the linear utilities or small telecommunication cabinets as permitted activities.</p> <p>Chorus requests permitted activity status under the applicable permitted activity condition in each zone for lines (above and below ground), including any ancillary earthworks such as trenching, as well as network utility masts and building/cabinets not exceeding 5m<sup>2</sup> in floor area.</p>	<p>Amend Rule 19.6.11 so that the following are provided for as a permitted activity:</p> <ul style="list-style-type: none"> <li>• Underground lines</li> <li>• Above ground lines including support poles</li> <li>• Network utility masts</li> <li>• Network utility cabinets/buildings not exceeding 5m<sup>2</sup> GFA;</li> <li>• Ancillary earthworks to any of the above activities.</li> </ul>	
96.34	Federated Farmers of New Zealand	Oppose	This condition is severely restricting for farmed properties and should be deleted. Federated Farmers notes that significant areas of land are included within	Delete Rule 19.6.11	517.30 Horticulture New Zealand - In-Part

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			<p>the Flood Hazard Overlay Areas, Planning Map 5 shows a good example of how much farmland is included within this overlay and therefore subject to this condition. In many cases entire properties are classified within the Flood Hazard Overlay Areas.</p> <p>Federated Farmers submits that the focus should be on adverse effects arising from land use and development rather than the activities themselves, and adverse effects should be avoided, remedied or mitigated to retain consistency with Section 31(1)(b)(i) of the RMA. Regulation should not unnecessarily restrict land use that is appropriate for the location susceptible to natural hazards like farming.</p> <p>The restriction to only 20m<sup>3</sup> of earthworks per site per 12 months will severely limit normal farming earthworks, which are unnecessary and will not achieve sustainable management. Council would be processing resource consent applications for minor activities like clean filling around troughs which will have no effect on flooding. The purpose of the rule needs to be further delineated as to prevent normal farming activities in the appropriate rural zone being captured. Most of the areas shown to be floodable are rural, and rural land use is appropriate and well established here, and earthworks are vital for farming to continue. While we recognise that tracks are excluded, this does not go far enough to ensure that normal farming earthworks can continue.</p> <p>The restriction to only 40m<sup>2</sup> floor are and the inclusion of non-habitable structures with permeable floors will directly restrict farm buildings, Federated Farmers submits that this is unnecessary and should be</p>		524.05 Higgins Group Holdings Ltd - Support

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			<p>deleted. Rules intended to manage flood risk should not accidentally regulate farm building or fences, as these are not inhabited so lives will not be at risk, and such sheds and fences will not make flooding worse. There is no need to require resource consent for a shed used to park tractors with a dirt floor: no lives are at risk if it floods; and there will be minimal damage compared to a house being flooded.</p> <p>The Building Consent process and Building Codes already manage a building's resilience to natural hazards and ensures that building will be constructed sufficiently to withstand natural hazards and keep people safe. There is no need for further regulation in the District Plan when concerns are already met by current building codes.</p>		
108.27	HDC(Planning Department)	In-Part	<p>The Proposed Plan contains rules which would require resource consent for the underground installation of network utilities such as pipes, lines and cables in the Flood Hazard Area. Given that the underground installation of these utilities would not result in any structures above ground that displace flood waters or would be at risk from a flood event the consent requirement would seem unduly onerous, particularly as it may be visually more acceptable to underground these utilities. The Plan should be amended to make the installation of underground network utilities a permitted activity. There would need to be an associated requirement for the ground to be reinstated with no change to the contour so that there was no additional effect on flood water flow paths.</p>	<p>Amend Rule 19.6.11 as follows:</p> <p><u>(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.</u></p>	<p>507.07 Chorus - Support</p> <p>508.07 Telecom - Support</p>

Heirs Partnership (7.02) request Rule 19.6.11 be amended so it only relates to areas with a known flood history or un-contestable high flood risk, unless the boundaries of the proposed flood hazard area are highly accurate.

Higgins Group Holdings Limited (77.07) seeks the deletion of Rule 19.6.11 or an exception for aggregate extraction activities.

Telecom (78.22) and Chorus (79.22) seek the addition of various types of network utility structures as permitted activities. Powerco (505.13) supports the submission from Telecom, requesting the wording for 'underground lines' refers to 'underground network utilities'.

Federated Farmers (96.34) request Rule 19.6.11 be deleted. This submission is supported by Higgins Group Holdings Ltd (524.05) and in part by Horticulture New Zealand (517.30).

The HDC (Planning Department) (108.27) requests an amendment to Rule 19.6.11 with a new condition for earthworks associated with installing underground network utilities. Chorus (507.07) and Telecom (508.07) support this request.

#### **4.18.2 Discussion & Evaluation**

1. The submission from Heirs Partnership contests Rule 19.6.11 if the mapping of the flood hazard area is accurate due to restriction on building and other activities. The accuracy of the flood hazard area is discussed later in this report in the section on Planning Maps.
2. Rule 19.6.11 is opposed by submitters as they contend it unduly restricts farming and aggregate extraction activities. As discussed in the Introductory section of this report, flood hazard is the most frequently experienced natural hazard in the District, and the likelihood of a major flood occurring in any year is high. In addition, during consultation for the District Plan Review, specific questions were asked about development in high-risk flood risks. The response to these questions was a strong preference for development in flood risk areas to be subject to a resource consent process due to the financial and social costs from flood damage.
3. The Proposed One Plan contains directive policies on the management of development in areas prone to flooding (Policy 10-1 and 10-2 in Appendix 4 of this report). These policies are based on identifying areas prone to flood hazard (i.e. 0.5% AEP (1 in 200 year) flood event) and avoiding new development in these areas unless specific circumstances are met using a regulatory approach. Therefore, the District Plan rules are the primary method for implementing these policies.
4. As discussed above for Rule 19.1(m), it is recommended an exception be added to Rule 19.6.11 to exclude these thresholds from applying to non-habitable structures or activities for primary production activities. This exception is considered to address the relief sought by Federated Farmers and Horticulture NZ for Rule 19.6.11, therefore, these submission points are recommended to be accepted in part.
5. Higgins comment that aggregate extraction activities within the bed of a river require resource consent from Horizons Regional Council where the effects on flood hazards are assessed, and therefore infer Rule 19.6.11 would duplicate this consent requirement and assessment. Comment has been sought from Horizons about this potential duplication and

the requirements of the Proposed One Plan in relation to aggregate extraction. Horizons advise as follows:

*The Proposed One Plan decisions version (2010) rules relating to earthworks adjacent to water bodies have been amended by the decisions of the Environment Court. These rules, which have been appealed, require consents for all earthworks over an area greater than 2,500 m<sup>2</sup> and land disturbance within setback distances (5 or 10 m depending on the slope of the land and/or the Values of the water body). Where these rules are restricted discretionary or controlled activity status, matters that Horizons can exercise discretion or control over do not include avoiding or mitigating flood effects.*

*However, Horizons considers that the flooding effects resulting from earthworks associated with aggregate extraction would be controlled by the Regional Council; for example, gravel extraction consents contain the following standard condition:*

*“The consent holder shall ensure that no holes, mounds, or stockpiles are left on any work site within the excavation area at the completion of any excavation sequence, and that no excavated material is stored or stockpiled in a position where the flow of water may be impeded.”*

*Structures associated with aggregate extraction would still be of concern.*

*It is Horizons' view that aggregate extraction activities could be excluded from Rule 19.6.11(a), but not (b). We suggest the following amendment to the exception in (a): “Except... period, or to aggregate extraction activities”.*

6. I concur with the submitter that obtaining resource consent from Horizons under the requirements of the Proposed One Plan as well as from HDC under the requirements of the District Plan for the same activity assessing the same effects is an inefficient approach. As Horizons have confirmed the aggregate extraction requirements under the Proposed One Plan would effectively manage and assess the impacts on flooding, I support an exception to Rule 19.6.11 as suggested by Horizons.
7. In relation to buildings and structures managed under Rule 19.6.11(b), occupied buildings (e.g. site office) or other structures associated with aggregate extraction (e.g. storage sheds) can place people and property at risk. Buildings and structures can impede or divert the flow path of floodwaters, and thereby change the course, extent or depth of flooding. Excluding aggregate extraction buildings and structures from this rule is considered inconsistent with the policies referred to above. For buildings and structures which exceed the thresholds in Rule 19.6.11(b), they would require resource consent as a restricted discretionary activity under Rule 19.3.3. The matters of discretion for this rule (listed in Rule 19.8.4) are solely focused on assessing the flood risk (e.g. depth, velocity, length of time of floodwaters) and measures to avoid or mitigate the flood risk (e.g. minimum floor level, safe evacuation route, etc). Accordingly, it is recommended Rule 19.6.11(b) be retained. Given the above, it is recommended the submission point from Higgins on Rule 19.6.11 be accepted in part.
8. The installation of underground network utilities and other above ground network utilities was evaluated in earlier sections of this report on the Residential Zone. It is considered similar circumstances apply in the Rural Zone to the Residential Zone, therefore, the same evaluation and recommendations apply as above. It is recommended new permitted activities be added to Rule 19.1 and associated standard in Rule 19.6 and these submission points be accepted.

#### 4.18.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
7.02		Heirs Partnership		Accept In-Part
77.07	506.42	Higgins Group Holdings Limited Ernslaw One Ltd	Support	Accept In-Part Accept In-Part
78.22	505.13	Telecom New Zealand Ltd Powerco	In part	Accept Accept
79.22		Chorus New Zealand Ltd		Accept
96.34	517.30 524.05	Federated Farmers of New Zealand Horticulture NZ Higgins Group Holdings Ltd	In-Part Support	Accept In-Part Accept In-Part Accept In-Part
108.27	507.07 508.07	HDC (Planning Department) Chorus Telecom	Support Support	Accept Accept Accept

#### 4.18.4 Recommended Amendments to the Plan Provisions

Add to Rule 19.1(m) the following:

(v) New above ground lines including support poles

(vi) New network utility masts

(vii) New network utility cabinets/buildings;

Amend Rule 19.6.11 as follows:

Exceptions:

(i) Except The above two standards (a) and (b) do not apply to any soil conservation and river/flood control works carried out by or on behalf of Horizons Regional Council.

(ii) Non-habitable structures/buildings or activities for primary production activities. For the purposes of this rule, "non-habitable" means a structure where people will not sleep.

(iii) The standards in (a) do not apply to aggregate extraction activities.

Add to Rule 19.6.11 as follows:

(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.

(d) Within a Flood Hazard Overlay Area, new network utility cabinets/buildings shall not exceed 5m<sup>2</sup> gross floor area.”

## 4.19 Rules 20.1(g): Open Space Zone – Permitted Activity List

### 4.19.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
41.25	Powerco	Support	Submitter supports Rule 20.1(g)	Retain Rule 20.1(g) without modification	
108.28	HDC (Planning Department)	In-Part	The Proposed Plan contains rules which would require resource consent for the underground installation of network utilities such as pipes, lines and cables in the Flood Hazard Area. Given that the underground installation of these utilities would not result in any structures above ground that displace flood waters or would be at risk from a flood event the consent requirement would seem unduly onerous, particularly as it may be visually more acceptable to underground these utilities. The Plan should be amended to make the installation of underground network utilities a permitted activity. There would need to be an associated requirement for the ground to be reinstated with no change to the contour so that there was no additional effect on flood water flow paths.	Amend Rule 20.1(g) as follows:  <u>(iii) Installation of underground network utilities.</u>	505.14 Powerco – In-Part 507.08 Chorus - Support 508.08 Telecom - Support

Powerco (41.25) support Rule 20.1(g).

The HDC (Planning Department) (108.28) request an amendment to Rule 20.1(g) to permit the installation of underground network utilities. Powerco (505.14), Chorus (507.08) and Telecom (508.08) all support this request to varying degrees.

### 4.19.2 Discussion & Evaluation

1. The HDC (Planning Department) requests the installation of underground network utilities be added as a permitted activity to the Open Space Zone. This request is the same as that evaluated earlier in this report relating to the Residential Zone. It is considered similar circumstances apply in the Open Space Zone to the Residential Zone, therefore, the same evaluation and recommendations apply as above. It is recommended a new permitted



activity is added to Rule 20.1(g) and associated standard on reinstatement in Rule 20.6 and these submission points be accepted.

#### 4.19.3 Reporting Officer’s Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer’s Recommendation
41.25		Powerco		Accept
108.28		HDC (Planning Department)		Accept
	505.14	Powerco	In-Part	Accept In-Part
	507.08	Chorus	Support	Accept
	508.08	Telecom	Support	Accept

#### 4.19.4 Recommended Amendments to the Plan Provisions

Add to Rule 20.1(g) as follows:

- “(iii) Installation of underground network utilities.”

Add to Rule 20.6.11 as follows:

“(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.”

## 4.20 Rule 20.4(d): Open Space Zone – Discretionary Activity List

### 4.20.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
41.30	Powerco	Support	Submitter supports Rule 20.4(d)	Retain Rule 20.4(d) without modification	

Powerco (41.30) supports Rule 20.4(d) for new network utilities as a discretionary activity within Flood Hazard Overlay Areas.

### 4.20.2 Discussion & Evaluation

1. The support for the above rule is noted.
2. As a consequential amendment to submissions on Rule 20.1(g) above regarding adding a new rule for the installation of underground network utilities, it is recommended a cross-reference is added to Rule 20.4(d) to refer to new Rule 20.1(g)(iii).

### 4.20.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
41.30		Powerco		Accept

### 4.20.4 Recommended Amendments to the Plan Provisions

Amend Rule 20.4(d)(ii) as follows:

- “(ii) Any new network utilities (except installation of underground network utilities, above ground lines, network utility masts, and network utility cabinets/buildings which are a permitted activity under Rule 20.1(g)).

## 4.21 Rule 20.6.11: Open Space Zone – Conditions for Permitted Activities (Flood Hazard Overlay Area)

### 4.21.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
78.23	Telecom New Zealand Ltd	In-Part	<p>As currently drafted the permitted activity conditions for flood hazard overlay areas would not provide for the linear utilities or small telecommunication cabinets as permitted activities.</p> <p>Telecom requests permitted activity status under the applicable permitted activity condition in each zone for lines (above and below ground), including any ancillary earthworks such as trenching, as well as network utility masts and building/cabinets not exceeding 5m<sup>2</sup> in floor area.</p>	<p>Amend Rule 20.6.11 so that the following are provided for as a permitted activity:</p> <ul style="list-style-type: none"> <li>Underground lines</li> <li>Above ground lines including support poles</li> <li>Network utility masts</li> <li>Network utility cabinets/buildings not exceeding 5m<sup>2</sup> GFA;</li> <li>Ancillary earthworks to any of the above activities.</li> </ul>	505.15 Powerco - In-Part
79.23	Chorus New Zealand Ltd	In-Part	<p>As currently drafted the permitted activity conditions for flood hazard overlay areas would not provide for the linear utilities or small telecommunication cabinets as permitted activities.</p> <p>Chorus requests permitted activity</p>	<p>Amend Rule 20.6.11 so that the following are provided for as a permitted activity:</p> <ul style="list-style-type: none"> <li>Underground lines</li> <li>Above ground lines including support</li> </ul>	

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			status under the applicable permitted activity condition in each zone for lines (above and below ground), including any ancillary earthworks such as trenching, as well as network utility masts and building/cabinets not exceeding 5m <sup>2</sup> in floor area.	<p>poles</p> <ul style="list-style-type: none"> <li>• Network utility masts</li> <li>• Network utility cabinets/buildings not exceeding 5m<sup>2</sup> GFA;</li> <li>• Ancillary earthworks to any of the above activities.</li> </ul>	
108.29	HDC (Planning Department)	In-Part	The Proposed Plan contains rules which would require resource consent for the underground installation of network utilities such as pipes, lines and cables in the Flood Hazard Area. Given that the underground installation of these utilities would not result in any structures above ground that displace flood waters or would be at risk from a flood event the consent requirement would seem unduly onerous, particularly as it may be visually more acceptable to underground these utilities. The Plan should be amended to make the installation of underground network utilities a permitted activity. There would need to be an associated requirement for the ground to be reinstated with no change to the contour so that there was no additional effect on flood water flow paths.	<p>Amend Rule 20.6.11 as follows:</p> <p><u>(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.</u></p>	<p>507.09 Chorus - Support</p> <p>508.09 Telecom - Support</p>

Telecom (78.23) and Chorus (79.23) seek the addition of various types of network utility structures as permitted activities. Powerco (505.15) supports the submission from Telecom, requesting the wording for ‘underground lines’ refers to ‘underground network utilities’.

The HDC (Planning Department) (108.29) requests an amendment to Rule 20.6.11 with a new condition for earthworks associated with installing underground network utilities. Chorus (507.09) and Telecom (508.09) support this request.

#### **4.21.2 Discussion & Evaluation**

1. The same submissions were made in relation to the Residential Zone and were evaluated earlier in this report. It is considered similar circumstances apply in the Open Space Zone to the Residential Zone, therefore, the same evaluation and recommendations apply as above.

It is recommended new permitted activities be added to Rule 20.1 and associated standard in Rule 20.6 and these submission points be accepted.

#### 4.21.3 Reporting Officer's Recommendation

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
78.23	505.15	Telecom New Zealand Ltd Powerco	In part	Accept Accept
79.23		Chorus New Zealand Ltd		Accept
108.29	507.09 508.09	HDC (Planning Department) Chorus Telecom	Support Support	Accept Accept Accept

#### 4.21.4 Recommended Amendments to the Plan Provisions

Add to Rule 20.1(g) the following:

(iv) New above ground lines including support poles

(v) New network utility masts

(vi) New network utility cabinets/buildings;

Add to Rule 20.6.11 as follows:

“(d) Within a Flood Hazard Overlay Area, new network utility cabinets/buildings shall not exceed 5m<sup>2</sup> gross floor area.”

## 4.22 Planning Maps

### 4.22.1 Submissions Received

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
10.00	Anne Hunt	Oppose	Oppose the omission of liquefaction hazard areas on the Planning Maps.	Amend Planning Maps to identify liquefaction hazard areas within the district.	
107.02	Rosalie Huzziff	In-Part	Liquefaction hazard areas should be identified on Planning Maps.  No further subdivision should be permitted within the areas of high risk as published by Horizons	Amend Planning Maps 1, 2, 4, 5, 12, 13, 14 and 15 to identify liquefaction hazard areas and revise	

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			Regional Council.  In the Foxton area, the town should be headed in a northern area which would involve a revision of planned areas for urban expansion.		
65.06	Horowhenua Farmers' Ratepayer Group	In-Part	There are some areas identified within the proposed Flood Hazard Area Overlay that are incorrect.	Amend Planning Maps to accurately identify flood hazard areas in conjunction with landowners.	
66.06	Bruce & Christine Mitchell	In-Part	There are some areas identified within the proposed Flood Hazard Area Overlay that are incorrect.	Amend Planning Maps to accurately identify flood hazard areas in conjunction with landowners.	
102.01	Christina Paton	In-Part	There are no maps in the proposed District Plan on the liquefaction high risk factor that has been identified by Horizons Regional Council. Further, this information has not been included in the texts of this proposed District Plan and they are therefore perceived as being incomplete.  Would like to see this proposal laid on the table until all relevant information has been provided for public consultation and that adequate explanation is supplied as to why this information was omitted according to instruction from the Horowhenua Councillors. Given that the Christchurch City Council is currently under duress because a similar omission was decided on in the past I fail to see why the Horowhenua District Council can justify a like omission.  (See also Natural Hazards General)	Include high risk areas of liquefaction on the Planning Maps. The Proposed Plan should remain on the table until all relevant information has been provided for public consultation.	
53.00	McMenamin & Fitzgerald	Oppose	Submitter opposes the proposed Flood Hazard Area. The scientific basis for the flood hazard is questionable, the actual delineation does not make sense (e.g. the exclusion of the Waikawa Beach settlement), and the proposal will	Amend the Planning Maps so that the boundaries of the Flood Hazard Area more realistically reflect the most vulnerable areas No specific relief requested.	525.12 Maurice and Sophie Campbell - Support

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
			adversely and unnecessarily affect the values of the properties in the area.	The whole basis for the Flood Hazard Area needs to be examined and the science verified before any such zone is imposed.	
59.00	Peter & Susan Webb	Oppose	Submitter opposes the Planning Map 7 In-Particular the identification of the Ohau River Flood Plain (Flood Hazard Area) which is inaccurately displayed. The plain is shown to affect the submitter's property at 354 Muhunua East Road including an area which is some 60 feet above the river and is incapable of being flooded.	Amend Planning Map 7 so that boundary of the flood plain (Flood Hazard Area) insofar as it affects 354 Muhunua East Road, Ohau, follows the contours of the escarpment alongside the river rather than the current straight line which encompasses part of the land that is incapable of being flooded.	
7.00	Heirs Partnership	Oppose	Oppose the extent of the Flood Hazard Area. The area marked as susceptible to flooding at 756 Foxton Road, Levin has only been susceptible to spot ponding in low and peaty or sandy parts of the property.	Amend Planning Map 4 to remove 756 Foxton Road, Levin from the Proposed Flood Hazard Area Overlay or if Council wishes to retain it then Council needs to justify the exact behaviour.	
27.07	Horizons Regional Council	Support	Support the identification of the Moutoa floodway.	No specific relief requested.  Inferred: Retain the identification of the Moutoa Floodway on Planning Maps 4 and 5.	
65.10	Horowhenua Farmers' Ratepayer Group	In-Part	Large areas of land, especially in the coastal area have been identified as high liquefaction risk areas. Rising sea levels are also a threat to development along the coast.	Amend Proposed Plan to take into account risk of liquefaction and sea level rise when considering subdivision in coastal areas and areas susceptible to flooding.	
66.10	Bruce & Christine Mitchell	In-Part	Large areas of land, especially in the coastal area have been identified as high liquefaction risk areas. Rising sea levels are also a threat to development along the coast.	Amend Proposed Plan to take into account risk of liquefaction and sea level rise when considering subdivision in coastal areas and areas	

Sub No.	Submitter Name	Support/ In-Part/ Oppose	Summary of Submission	Decision Requested	Further Submission
				susceptible to flooding.	
103.03	Colin Easton	In-Part	Liquefaction needs to be looked at when subdivision is being proposed in certain areas.	No specific relief requested.  Inferred: Ensure the Plan requires liquefaction to be looked at when a subdivision is being proposed.	
4.00	Malcolm Guy	In-Part	More information is required regarding the Flood zones [Flood Hazard Area Overlay] in the Rural Areas especially the 'boundary areas' in proposed zones.	Include more information regarding the Proposed Flood Hazard Area Overlay.	

Anne Hunt (10.00), Rosalie Huzziff (107.02), Christina Paton (102.01), Horowhenua Farmers' Ratepayer Group (65.10), Bruce and Christine Mitchell (66.10) and Colin Easton (103.03) either request or indicate the Planning Maps show areas at risk from liquefaction. Bruce and Christine Mitchell (66.10) also seek risk of sea level rise be taken into account when considering subdivision in coastal areas and areas susceptible to flooding.

Horowhenua Farmers' Ratepayer Group (65.06), Bruce and Christine Mitchell (66.06), McMenamin & Fitzgerald (53.00) and Malcolm Guy (4.00) either seek clarification, further information and/or further consultation landowners to accurately identify flood hazard areas. Maurice and Sophie Campbell (525.12) support the submission from McMenamin & Fitzgerald.

Peter and Susan Webb (59.00) request Planning Map 7 be amended so the extent of the Flood Hazard Overlay Area follows the river escarpment on the property at 354 Muhunua East Road, Ohau.

Heirs Partnership (7.00) request Planning Map 4 be amended to remove the property at 756 State Highway 1 (Foxton Road), Levin from the Flood Hazard Overlay Area.

Horizons (27.07) support the identification of the Moutoa Floodway.

#### **4.22.2 Discussion & Evaluation**

##### **Liquefaction**

- As evaluated earlier in this report, liquefaction is one type of natural hazard that can result from seismic activity. The most susceptible soils to liquefaction are loose coarse silts and sands. The 2010 and 2011 Canterbury earthquakes highlighted the impacts and consequences posed by liquefaction. Since these earthquakes, various new or revised regulations and guidance has been produced (and further regulations and/or guidance is under investigation and consideration) responding to the risks from seismic hazards, including liquefaction. While many of these regulations and guidance specifically relate to Canterbury, they are considered helpful in understanding and responding to liquefaction risks in the Horowhenua. Recently issued regulations and guidance of note include:

- (a) *Just Add Water: When Should Liquefaction Be Considered in Land Use Planning? GNS Science Miscellaneous Series No. 47, December 2012.*
  - (b) *Review of liquefaction hazard information in eastern Canterbury, including Christchurch City and parts of Selwyn, Waimakariri and Hurunui Districts, GNS Science for Environment Canterbury, December 2012.*
  - (c) *Guidelines for the investigation and assessment of subdivisions on the flat in Canterbury - Minimum requirements for geotechnical assessment for land development ('flatland areas' of the Canterbury region), Department of Building and Housing, September 2012.*
  - (d) *Compliance Document for New Zealand Building Code: Clause B1 – Structure, Department of Building and Housing, as amended in August 2011.*
2. In responding to the requests to take into account liquefaction risks and/or identify areas at high risk from liquefaction on the Planning Maps, it is necessary to understand the policy context for seismic hazards and how the identification of these areas could be used or applied.
  3. As outlined in the introductory section of this report, the Horizons Proposed One Plan groups all types of natural hazards including seismic hazards (excluding flooding) into a single policy framework. The policy (10-5) requires territorial authorities to “manage future development and activities in areas susceptible to natural hazard events (excluding flooding) in a manner which ensure that any increase in risk to human life, property or infrastructure from natural hazard events is avoided where practicable, or mitigated where the risk cannot be practicably avoided”. The explanation associated with this policy states “Hazard avoidance is preferred to hazard mitigation because of the impacts on human life, property and infrastructure. Avoiding all hazards is difficult, however, because of their infrequency and the widespread nature of their effects”. Further, an associated policy (10-4) on critical infrastructure and natural hazards, the explanation records that in some cases locating critical infrastructure in areas prone to natural hazards is unavoidable. It states “for example, roading and gas supplies in coastal areas regardless of tsunami risk, and infrastructure in settlements located on liquefaction zones.”
  4. In the Proposed Plan, the policy on seismic hazards is to “ensure that all structures and activities are constructed so as to minimise material damage from seismic events” (Policy 8.1.9). The implementation of this policy relies on controls under the Building Act 2004 (e.g. New Zealand Building Code). These controls ensure buildings are designed and constructed to a minimum standard for the seismic risk of the particular locality. The NZ Building Code refers to an Earthquake Zones map in NZ Standard 4229:1999 (refer Appendix 5 for a copy of this map). This map shows the entire Horowhenua and lower North Island as within ‘Zone A’ – High. This zoning means the highest standard apply for building foundations and wall bracing due to the seismic risk, including liquefaction.
  5. Notwithstanding the above approach, Council still has an obligation under Section 106 of the RMA in assessing subdivision applications where there are significant risks from natural hazards (e.g. erosion, falling debris, subsidence, slippage, or inundation). In my experience with HDC and other Councils, if a natural hazard is suspected, irrespective of the potential hazard being identified on the Planning Maps, the Councils seek information as part of assessing a plan change or subdivision application. This approach is recognised in the



recent guidelines produced for the Canterbury region and is considered a prudent and appropriate approach in the Horowhenua.

6. The submitters may be aware of or are referring to a map produced by the Manawatu-Wanganui Region Civil Defence and Emergency Management Group as part of a Lifelines Report<sup>6</sup> (refer Appendix 6). The map in the Lifelines Report (titled “Risks and Responsibilities: Report of the Manawatu-Wanganui Lifelines Project”) is based on information and map contained in a research report<sup>7</sup> prepared by GNS for Horizons Regional Council.
7. Advice was sought from Horizons on the most recent information on liquefaction in the Horowhenua. Horizons have advised “the Lifelines Report is the most recent effort to consolidate regional level information on hazards in the region. The status of the report can be considered as the current source of consolidated data with the Lifelines Group acknowledging that more recent research has been undertaken on some hazards in some areas – notably flood hazard. An updated version of the report is on the Lifelines Advisory Group’s work programme”. In addition, Horizons advise “the focus for future hazard research is currently being investigated and the cost benefit of undertaking such work will be considered by Council in due course”.
8. Therefore, this liquefaction map is the currently best available information on liquefaction risk in the Horowhenua. This information is used as a source of information by emergency management planners and resource management planners on natural hazards in the region. For example, in requesting information from subdivision applicants.
9. In addition, in relation to two submissions which raise liquefaction risks for Foxton and Foxton Beach, Horizons further comment as follows:

*“Foxton is well and truly inside a highly susceptible area and tinkering with urban growth directions is unlikely to have much effect. Horizons recommends that the District undertake a revised liquefaction study in order to more accurately identify areas at risk using the latest techniques and knowledge available to the scientific community. The work that was undertaken for the Hazard Analysis Manual references work as far back as 1855 but more commonly between 1963 and 1994. The maps were originally drawn at an inch to the mile using felt pens and colouring pencils! A piecemeal approach with developers funding the research could be considered as suggested by Submitter no. 103.03.”*
10. This comment from Horizons is acknowledged. However, under Policy 10-1 of the Proposed One Plan, a responsibility of the Regional Council is “taking the lead role in collecting, analysing and storing regional natural hazard information and communicating this information to Territorial Authorities”.
11. Lastly, as indicated above, further regulations and guidance is anticipated on responding to seismic hazards, including liquefaction following the Canterbury earthquakes. For example, it is possible central government may make changes to the RMA (e.g. the recently released

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<sup>6</sup> “Lifelines” are the network services of water, sewage, transport, power and communications which are essential to the functioning of a community.

<sup>7</sup> Dellow G.D., Coote T.P. and Beetham R.D. 1999 Hazard Analysis Manual Volume 2, Section 4D: Assessment of liquefaction induced ground failure susceptibility in the Manawatu-Wanganui Region, Horizons Regional Council Report 99/EXT/383, ISBN 1-877221-54-6.

Discussion Document indicates such changes) and building regulations. Therefore, the Council may need to review this policy approach or implement other requirements (e.g. building controls).

12. Given the above, identifying on the Planning Maps the areas at high risk from liquefaction using the information from the Lifelines Report is not considered the most efficient or effective approach for implementing this policy. Therefore, it is recommended the submission points on adding the liquefaction areas to the District Plan Planning Maps be rejected.

### **Sea Level Rise**

13. Bruce and Christine Mitchell (66.10) seek the risk of sea level rise be taken into account when considering subdivision in coastal areas and areas susceptible to flooding. The Proposed Plan includes a 'Coastal Natural Character and Hazard Area' which extends along the full length of Horowhenua coastline. One of the purposes of delineating this coastal hazard area is due to the risk of coastal hazards and managing subdivision and development within this area. It is understood the recent modelling of the flood hazard areas for the Waikawa and Manakau Streams factor in climate change parameters (e.g. rainfall trends and sea level rise).
14. Comment was sought from Horizons on the approach to sea level rise for the flood modelling. They advise as follows:

*“Sea level rise has been factored into the flood modelling using the advice in the Ministry for the Environment Guidelines entitled “Coastal Hazards and Climate Change: A Guidance Manual for Local Government in New Zealand”, 2<sup>nd</sup> Edition July 2008. Horizons has used the Ministry’s “base” sea level rise to 2062 and the “additional value” for 2112. Emissions, temperature and sea levels are all rising at the rate of the “high” emission scenarios (MfE advice) and the “additional value” is generally being applied by coastal hazards experts for forecasts to 100 years time.”*

15. At this time, the other areas of flood hazard do not, but I understand they would be progressively updated over time. Notwithstanding the above, when assessing resource consent applications for new subdivision and development within flood hazard areas, the nature and extent of flooding, including any influence by sea level rise, would be included. Therefore, as it is considered the Proposed Plan already provides for the relief sought by the submitter and this submission point is accepted in part.

### **Flood Hazard Overlay Areas**

16. There are two groups of submissions on the mapped Flood Hazard Overlay Areas: 1) General submissions; 2) Property specific submissions.
17. In terms of the general submissions which either seek clarification, further information and/or further consultation with landowners to accurately identify flood hazard areas, the following extract from the Section 32 Report – Natural Hazards provides a commentary in response to these submission points:

*“Flood Hazard Area - Mapping*

*For the above policies and methods to be implemented, the floodable areas (Moutoa floodway and in areas subject to 1 in 200 year flood event) need to be mapped. The*

*Moutoa floodway can be precisely mapped using the designation and One Plan information. However, at this time, there has been no district-wide modelling completed accurately mapping the 1 in 200 year flood event.*

*Horizons Regional Council (with support from the other District Councils in the region through the Civil Defence and Emergency Management Group (CDEMG)) has a programme in place of progressively modelling the areas subject to a 1 in 200 year flood event for the entire Manawatu-Wanganui region. In the Horowhenua district, this modelling has been completed for the Waikawa and Manakau Stream catchments and this information can be used for District Plan purposes. However, modelling is yet to be undertaken for the Manawatu and Ohau Rivers, Tokomaru Stream and their various tributaries (e.g. Mangaore Stream).*

*In the absence of this detailed modelling information on flood prone areas, other available flood information has been considered. This other information includes the 1996 Flood Hazard Manual produced by Horizons Regional Council (modelling the 1 in 100 year flood event based on flood protection structures at that time), mapped extent of the 2004 Manawatu River flood and 2009 and 2010 Ohau River floods, recorded observations by HDC staff of areas which have flooded and Civil Defence/Emergency Management Lifelines Report. Incidentally, it is noted the 2004 Manawatu River flood has been compared to a 1 in 100 years flood, although the character and extent of the flood was larger than previously anticipated.*

*The 1996 Flood Hazard Manual is considered the best available information for the Manawatu and Ohau Rivers, Tokomaru Stream and their various tributaries at this time for use in the District Plan (it is noted the current Manawatu and Palmerston North District Plan identified flood areas are based on this 1996 Manual). In addition, the major flood events (2004, 2009 and 2010) flooded areas outside those areas identified in the 1996 Manual, due to the particular conditions of these floods and the specific breaches in the flood protection measures.*

*The recorded observations by HDC staff of areas which have flooded could be a one-off occurrence or a regular situation. However, the reasons for this flooding may be unknown, for example, it could have been caused by a blocked drain. In addition, there is limited information about the depth and flow for these observed flood locations. The Lifelines Report was prepared to plan for responses to a civil defence/emergency event. To inform this report, the general nature, location and likelihood of the different types of natural hazards were documented. The hazard information is at a high level, and is not considered suitable for use for land use planning purposes.*

*Under Section 32 of the Act, when Council is making its evaluation of the plan provisions, it needs to consider the risks of acting or not acting if there is uncertain or inadequate information. The risks associated with flood hazards are considered significant, given it is the most frequent and likely natural hazard experienced in the district. While at this time the available information is not fully consistent with the policy direction (i.e. the 1 in 200 year flood area is not available for the whole district), the risk of not acting could result in significant costs to people, property and the environment.*

*Therefore, the flood hazard areas identified in the District Plan are to be based on the areas identified in the 1996 Flood Hazard Manual and areas that flooded during recent major flood events (2004, 2009 and 2010).”*

18. The above commentary outlines the basis on which the location and extent of the Flood Hazard Overlay Areas have been identified. The submission from McMenamin & Fitzgerald (53.00) specifically query the boundaries of the Flood Hazard Overlay Area in the Waikawa Beach area.
19. Specific comment has been sought from Horizons on the submissions from McMenamin & Fitzgerald. Horizons respond as follows:

*“We have high confidence in the modelling, which was undertaken for us by the Christchurch office of the Danish Hydraulic Institute in 2008. Horizons anticipates improving the accuracy of the indicative flood layer for Waikawa this financial year (2012/13).”*

20. Given the above comment Horizons, in the absence of any contrary evidence, it is considered the boundaries of the Flood Hazard Overlay Area in the Waikawa Beach area is accurate.
21. If submitters have other specific areas they consider are incorrect, it is suggested they bring these areas to the attention of Council officers prior to the hearing to enable them to be reviewed. On the basis of the above, it is recommended the Flood Hazard Overlay Area is retained as in the Proposed Plan.
22. In regarding to the property specific submissions, Peter and Susan Webb (59.00) seek an amended to the boundary of the Flood Hazard Overlay Area on Planning Map 7 for the property at 354 Muhunoa East Road, Ohau. The submitter has directly liaised with Horizons regarding the flood extent. In the correspondence between the submitter and Horizons, Horizons state:

*Good afternoon Susan and Peter, further to our meeting this afternoon I can confirm that the terrace where your dwelling is located should not be shown as being affected by the “indicative” flood extent. I have attached for you 3 attachments which will hopefully be of use to you.*

*One is a view from a topographical map with the property boundary outlined in red and the “indicative” flood extent overlaid. As can be seen on this image, the high terraced area is marked by the black lines with the small triangular pieces coming off it. On a topographical map this denotes a terraced edge.*

*I have also included the same image however this time with the aerial picture which shows the dwelling.*

*The last image is a picture of the LIDAR imagery which shows the different shading as the ground levels change. On the second picture in that attachment I have marked the ground levels which show that the dwelling area (63.3m) is around 17m higher than the lower river flat at 46.2m. The levels are in terms of Wellington Datum.*

*Hopefully the information is of use to you as you discuss the flood zone with the Horowhenua District Council.*

23. The images referred to in the above correspondence are attached in the Appendix 7 to this report. Given the above advice and information, it is recommended the extent of the Flood

Hazard Overlay Area be amended to exclude the upper terrace and align with the base of the terrace.

24. In regard to the submission from Heirs Partnership who request the Flood Hazard Overlay Area be removed from the property at 756 State Highway (Foxton Road), Levin, or that Council justifies its basis, below is a map of this property showing an aerial photo with the extent of the Flood Hazard Overlay Area overlaid.



25. Horizons Regional Council has reviewed the flood modelling in this location and has advised “the information we have relating to this property is indicative”. This comment highlights the level of accuracy where detailed flood modelling has not been undertaken. It is understood this flood modelling is based on different indicative scenarios of breaches in the stopbanks on the Lower Manawatu River flood protection scheme.
26. As quoted above from the Section 32 Report, the RMA requires Council in making its evaluation of the plan provisions, it needs to consider the risks of acting or not acting if there is uncertain or inadequate information. The risks associated with flood hazards are considered significant, given it is the most frequent and likely natural hazard experienced in the district. While at this time the available information is “indicative” and may not precisely map the 1 in 200 year flood event area, the risk of not acting could result in significant costs to people, property and the environment. In this case, the risk of not acting would be removing the Flood Hazard Overlay Area from the property.
27. It is recognised this approach is risk averse. However, it is considered the recommended amendments to the rules that apply to the Flood Hazard Overlay Area outlined earlier in this report address the particular concern raised by the submitter. That is, the restrictions placed on primary production activities. Accordingly, in relation to removing from the Flood Hazard Overlay Area from the property, it is recommended this submission point is rejected.

28. Notwithstanding the above assessment and recommendation, I consider the flood hazard mapping could be improved and mapped to a higher level of accuracy. This more accurate mapping based on more accurate flood modelling would apply the Flood Hazard Overlay Area with a greater level of precision and assist in the assessment of resource consent applications for activities and development in floodable areas (e.g. flood depth, velocity and flow paths). In my opinion, for the Proposed One Plan policy directives to be effectively given effect to, this requires good quality information. The Proposed One Plan includes Methods to map natural hazards (including areas prone to flooding) “by 2010 and updated as required”. As outlined in the above quote from the Section 32 Report, I note parts of the Flood Hazard Overlay Area identified for the Lower Manawatu River and possibly the Ohau River are based on flood modelling work which pre-dates 1996. Given the improvements to flood modelling tools since the mid-1990s, I consider re-modelling the Lower Manawatu River and other rivers should be undertaken as a priority. I recommend the Hearing Panel recommend that Horowhenua District Council and formally request Horizons Regional Council (as having the lead role in collecting, analysing and storing regional natural hazard as per the Proposed One Plan policies) to prioritise flood modelling for rivers in the Horowhenua where this work has not been undertaken in the last five years. I recommended a timeline be placed on this request on when this information would be available (e.g. within two years).

#### **4.22.3 Reporting Officer’s Recommendation**

<b>Sub. No</b>	<b>Further Sub. No.</b>	<b>Submitter Name</b>	<b>Further Submitter Position</b>	<b>Officer’s Recommendation</b>
10.00		Anne Hunt		Reject
107.02		Rosalie Huzziff		Reject
65.06		Horowhenua Farmers’ Ratepayer Group		Reject
66.06		Bruce & Christine Mitchell		Reject
102.01		Christina Paton		Reject
53.00	525.12	McMenamin & Fitzgerald	Support	Reject
		Maurice and Sophie Campbell		Reject
59.00		Peter & Susan Webb		Accept
7.00		Heirs Partnership		Reject
27.07		Horizons Regional Council		Accept
65.10		Horowhenua Farmers’ Ratepayer Group		Reject
66.10		Bruce & Christine Mitchell		Reject
103.03		Colin Easton		Reject
4.00		Malcolm Guy		Reject

#### ***4.22.4 Recommended Amendments to the Plan Provisions***

Amend Planning Map 7 to change to the extent of the Flood Hazard Overlay Area on the property at 354 Muhunua East Road as shown in the Appendix 7.

#### ***4.22.5 Recommendation on Other Measures***

Horowhenua District Council to formally request Horizons Regional Council to undertake flood modelling of the lower Manawatu River, Ohau River and any other waterbodies in the Horowhenua District where flood modelling has not been undertaken in the last five years. In addition, that the results of the flood modelling be provided to Horowhenua District Council within two years of the request.

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## **5. Conclusion and Main Recommended changes from Proposed Horowhenua District Plan (as notified)**

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The natural hazard provisions manage the risks from natural hazards in the Horowhenua. The natural hazard provisions in the Operative Plan have effectively been revised and updated, primarily in response to the directive policies in the Proposed One Plan which HDC is required to give effect to. Flooding is the most frequent and significant natural hazard in the District. Therefore, the Proposed Plan provisions contain a regulatory approach to give effect to the policy direction in the Proposed One Plan.

A variety of submissions were received, ranging from submissions supporting and opposing various Proposed Plan provisions. These submissions have requested a number of changes to the natural hazard provisions in the Proposed Plan.

The officer's main recommendations on the key issues raised in submission include:

- Excluding non-habitable structures and activities for primary production activities from the permitted activities thresholds in the Flood Hazard Overlay Areas
- Providing for the undergrounding and other small-scale network utilities in the Flood Hazard Overlay Areas
- Retaining the extent of the Flood Hazard Overlay Areas
- Not adding to the Planning Maps at risk from liquefaction
- That Horowhenua District Council formally requests Horizons Regional Council to undertake flood modelling of the lower Manawatu River, Ohau River and any other waterbodies in the Horowhenua District where flood modelling has not been undertaken in the last five years. In addition, that the results of the flood modelling be provided to Horowhenua District Council within two years of the request.



## 6. Appendices

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### 6.1 Appendix 1: Proposed District Plan as amended per officer's recommendations

It is recommended that the following amendments be made to the Chapter 8: Natural Hazards:

Amend Policy 8.1.6 as follows:

"Flood hazard avoidance is must be preferred to flood hazard mitigation."

It is recommended the following amendments be made to all the Zone Rule Chapters:

Add to Rules 15.1, 16.1, 17.1, 19.1 and 20.1 the following:

"(r) Soil conservation, erosion protection, river control or flood protection works undertaken by, or on behalf of Horizons Regional Council."

Amend Rules 15.1(j)(i), 16.1(n)(i), 17.1(p)(i), 19.1(m)(i) and 20.1(g)(i) as follows:

"(i) Soil conservation, erosion protection, river control or flood protection works undertaken by, or on behalf supervised of Horizons Regional Council."

Amend the second bullet point under Rules 15.1(j), 16.1(n), 17.1(p), 19.1(m) and 20.1(g) as follows:

- "Refer to rules in the Horizons Regional Council's Proposed One Plan relating to activities in the bed of lakes and rivers, for land adjacent to rivers ~~zoned for river and flood control~~, all land use activities in the coastal marine area, coastal foredunes, areas with flood control and drainage schemes, and erosion protection works that cross or adjoin mean high water springs."

It is recommended the following amendments be made to Chapter 15: Residential Zone Rules:

Add to Rule 15.1(j) as follows:

"(iii) Installation of underground network utilities.

(iv) New above ground lines including support poles

(v) New network utility masts

(vi) New network utility cabinets/buildings;"

Amend Rule 15.4(h)(ii) as follows:

“(ii) Any new network utilities (except installation of underground network utilities, above ground lines, network utility masts, and network utility cabinets/buildings which are a permitted activity under Rule 15.1(i)).

Add to Rule 15.6.14 as follows:

“(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.

“(d) Within a Flood Hazard Overlay Area, new network utility cabinets/buildings shall not exceed 5m<sup>2</sup> gross floor area.”

It is recommended the following amendments be made to Chapter 16: Industrial Zone Rules:

Add to Rule 16.1(n) as follows:

“(iii) Installation of underground network utilities.

“(iv) New above ground lines including support poles

“(v) New network utility masts

“(vi) New network utility cabinets/buildings”

Amend Rule 16.4(e)(ii) as follows:

“(ii) Any new network utilities (except installation of underground network utilities, above ground lines, network utility masts, and network utility cabinets/buildings which are a permitted activity under Rule 16.1(i)).

Add to Rule 16.6.19 as follows:

“(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.”

“(d) Within a Flood Hazard Overlay Area, new network utility cabinets/buildings shall not exceed 5m<sup>2</sup> gross floor area.”

It is recommended the following amendments be made to Chapter 17: Commercial Zone Rules:

Add to Rule 17.1(p) as follows:

- “(iii) Installation of underground network utilities.
- (iv) New above ground lines including support poles
- (v) New network utility masts
- (vi) New network utility cabinets/buildings;

Amend Rule 17.4(g)(ii) as follows:

- “(ii) Any new network utilities (except installation of underground network utilities, above ground lines, network utility masts, and network utility cabinets/buildings which are a permitted activity under Rule 17.1(p)).

Add to Rule 17.6.21 as follows:

- “(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.”
- (d) Within a Flood Hazard Overlay Area, new network utility cabinets/buildings shall not exceed 5m<sup>2</sup> gross floor area.”

It is recommended the following amendments be made to Chapter 19: Rural Zone Rules:

Add to Rule 19.1(m) as follows:

- “(iv) Installation of underground network utilities
- (v) New above ground lines including support poles
- (vi) New network utility masts
- (vii) New network utility cabinets/buildings”

Amend Rule 19.4.8(iv) as follows:

- “(iv) Any activity involving use, storage or disposal of hazardous substances.”

Amend Rule 19.4.8(a)(ii) as follows:

“(ii) Any new network utilities (except installation of underground network utilities, above ground lines, network utility masts, and network utility cabinets/buildings which are a permitted activity under Rule 19.1(m)).

Amend Rule 19.4.8(b) as follows:

“(b) Any activities (including buildings, and structures) and activities within the Moutoa Floodway that are not listed as a permitted activity under Rule 19.1(m).”

Amend Rule 19.6.11 as follows:

Exceptions:

(i) ~~Except~~ The above two standards (a) and (b) do not apply to any soil conservation and river/flood control works carried out by or on behalf of Horizons Regional Council.

(ii) Non-habitable structures/buildings or activities for primary production activities. For the purposes of this rule, “non-habitable” means a structure where people will not sleep.

(iii) The standards in (a) do not apply to aggregate extraction activities.

Add to Rule 19.6.11 as follows:

“(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.

“(d) Within a Flood Hazard Overlay Area, new network utility cabinets/buildings shall not exceed 5m<sup>2</sup> gross floor area.”

It is recommended the following amendments be made to Chapter 20: Open Space Zone Rules:

Add to Rule 20.1(g) as follows:

“(iii) Installation of underground network utilities

“(iv) New above ground lines including support poles

“(v) New network utility masts

“(vi) New network utility cabinets/buildings”

Amend Rule 20.4(d)(ii) as follows:

“(ii) Any new network utilities (except installation of underground network utilities, above ground lines, network utility masts, and network utility cabinets/buildings which are a permitted activity under Rule 20.1(g)).

Add to Rule 20.6.11 as follows:

“(c) Within a Flood Hazard Overlay Area, the installation of underground network utilities shall not result in any change to the existing contour of the land once the installation has been completed and earthworks reinstated.

“(d) Within a Flood Hazard Overlay Area, new network utility cabinets/buildings shall not exceed 5m<sup>2</sup> gross floor area.”

It is recommended the following amendments be made to the Planning Maps:

Amend Planning Map 7 to change to the extent of the Flood Hazard Overlay Area on the property at 354 Muhunua East Road as shown in the Appendix 7.

## 6.2 Appendix 2: Schedule of Officer's Recommendations on Submission Points

Sub. No	Further Sub. No.	Submitter Name	Further Submitter Position	Officer's Recommendation
101.58	505.01	Director-General of Conservation (DoC) Powerco	Support	Reject Reject
101.60	505.02	Director-General of Conservation (DoC) Powerco	Support in part	Reject Accept In-Part
27.06		Horizons Regional Council		Accept
27.08		Horizons Regional Council		Accept
99.04	505.03	Transpower New Zealand Ltd Powerco	Support	Accept Accept
27.09		Horizons Regional Council		Accept
99.05		Transpower New Zealand Ltd		Accept
67.15		Taiao Raukawa Environmental Resource Unit		Accept In-Part
67.16		Taiao Raukawa Environmental Resource Unit		Accept
107.00		Rosalie Huzziff		Reject
11.26	519.21	Philip Taueki Charles Rudd(Snr)	Support	Reject Reject
11.27	519.22	Philip Taueki Charles Rudd(Snr)	Support	Reject Reject
60.19		Muaupoko Co-operative Society		Reject
60.21		Muaupoko Co-operative Society		Reject
98.30		Horticulture NZ		Accept In-Part
102.00		Christina Paton		Reject
27.18		Horizons Regional Council		Accept
41.21		Powerco		Accept
108.20	505.06 507.00 508.00	HDC (Planning Department) Powerco Chorus New Zealand Ltd Telecom New Zealand Ltd	In-Part Support Support	Accept Accept Accept Accept

	511.07	HDC (Community Assets Department)	In-Part	Accept
41.26		Powerco		Accept
78.19		Telecom New Zealand Ltd		Accept
	505.07	Powerco	In part	Accept
79.19		Chorus New Zealand Ltd		Accept
108.21		HDC (Planning Department)		Accept
	507.01	Chorus New Zealand Ltd	Support	Accept
	508.01	Telecom New Zealand Ltd	Support	Accept
41.22		Powerco		Accept
108.22		HDC (Planning Department)		Accept
	505.08	Powerco	In-Part	Accept In-Part
	507.02	Chorus New Zealand Ltd	Support	Accept
	508.02	Telecom New Zealand Ltd	Support	Accept
41.27		Powerco		Accept
78.20		Telecom New Zealand Ltd		Accept
	505.09	Powerco	In part	Accept In-Part
79.20		Chorus New Zealand Ltd		Accept
108.23		Horowhenua District Council (Planning Department)		Accept
	507.03	Chorus New Zealand Ltd	Support	Accept
	508.03	Telecom New Zealand Ltd	Support	Accept
41.23		Powerco		Accept
108.24		HDC(Planning Department)		Accept
	505.10	Powerco	In-Part	Accept In-Part
	507.04	Chorus New Zealand Ltd	Support	Accept
	508.04	Telecom New Zealand Ltd	Support	Accept
41.28		Powerco		Accept
78.21		Telecom New Zealand Ltd		Accept
	505.11	Powerco	In part	Accept In-Part
79.21		Chorus New Zealand Ltd		Accept
108.25		HDC(Planning Department)		Accept
	507.05	Chorus New Zealand Ltd	Support	Accept

	508.05	Telecom New Zealand Ltd	Support	Accept
32.19		NZ Pork		Accept
	506.65	Ernslaw One Ltd	Support	Accept
	513.04	Rayonier New Zealand Ltd	Support	Accept
41.24		Powerco		Accept
96.29		Federated Farmers of New Zealand		Accept
	513.16	Rayonier New Zealand Ltd	Support	Accept
	517.22	Horticulture NZ	In-Part	Accept In-Part
99.24		Transpower New Zealand Ltd		Accept
	516.14	Federated Farmers of New Zealand	Oppose	Reject
108.26		HDC (Planning Department)		Accept
	505.12	Powerco	In-Part	Accept In-Part
	507.12	Chorus New Zealand Ltd	Support	Accept
	508.06	Telecom New Zealand Ltd	Support	Accept
	516.15	Federated Farmers of New Zealand	Oppose	Reject
7.01		Heirs Partnership		Reject
41.29		Powerco		Accept
98.38		Horticulture NZ		Accept
	516.16	Federated Farmers of New Zealand	Support	Accept
99.29		Transpower New Zealand Ltd		Accept In-Part
7.02		Heirs Partnership		Accept In-Part
77.07		Higgins Group Holdings Limited		Accept In-Part
	506.42	Ernslaw One Ltd	Support	Accept In-Part
78.22		Telecom New Zealand Ltd		Accept
	505.13	Powerco	In part	Accept
79.22		Chorus New Zealand Ltd		Accept
96.34		Federated Farmers of New Zealand		Accept In-Part
	517.30	Horticulture NZ	In-Part	Accept In-Part
	524.05	Higgins Group Holdings Ltd	Support	Accept In-Part
108.27		HDC (Planning Department)		Accept
	507.07	Chorus New Zealand Ltd	Support	Accept
	508.07	Telecom New Zealand Ltd	Support	Accept



41.25		Powerco		Accept
108.28	505.14	HDC (Planning Department) Powerco	In-Part	Accept Accept In-Part
	507.08	Chorus New Zealand Ltd	Support	Accept
	508.08	Telecom	Support	Accept
41.30		Powerco		Accept
78.23	505.15	Telecom New Zealand Ltd Powerco	In part	Accept Accept
79.23		Chorus New Zealand Ltd		Accept
108.29	507.09	HDC (Planning Department) Chorus	Support	Accept Accept
	508.09	Telecom	Support	Accept
10.00		Anne Hunt		Reject
107.02		Rosalie Huzziff		Reject
65.06		Horowhenua Farmers' Ratepayer Group		Reject
66.06		Bruce & Christine Mitchell		Reject
102.01		Christina Paton		Reject
53.00	525.12	McMenamin & Fitzgerald Maurice and Sophie Campbell	Support	Reject Reject
59.00		Peter & Susan Webb		Accept
7.00		Heirs Partnership		Reject
27.07		Horizons Regional Council		Accept
65.10		Horowhenua Farmers' Ratepayer Group		Reject
66.10		Bruce & Christine Mitchell		Reject
103.03		Colin Easton		Reject
4.00		Malcolm Guy		Reject

## 6.3 Appendix 3: Relevant Policies from New Zealand Coastal Policy Statement

### Policy 24 Identification of coastal hazards

- (1) Identify areas in the coastal environment that are potentially affected by coastal hazards (including tsunami), giving priority to the identification of areas at high risk of being affected. Hazard risks, over at least 100 years, are to be assessed having regard to:
  - (a) physical drivers and processes that cause coastal change including sea level rise;
  - (b) short term and long term natural dynamic fluctuations of erosion and accretion;
  - (c) geomorphological character;
  - (d) the potential for inundation of the coastal environment, taking into account potential sources, inundation pathways and overland extent;
  - (e) cumulative effects of sea level rise, storm surge and wave height under storm conditions;
  - (f) influences that humans have had or are having on the coast;
  - (g) the extent and permanence of built development; and
  - (h) the effects of climate change on:
    - (i) matters (a) to (g) above;
    - (ii) storm frequency, intensity and surges; and
    - (iii) coastal sediment dynamics;

taking into account national guidance and the best available information on the likely effects of climate change on the region or district.

### Policy 25 Subdivision, use and development in areas of coastal hazard risk

In areas potentially affected by coastal hazards over at least the next 100 years:

- (a) avoid increasing the risk<sup>8</sup> of social, environmental and economic harm from coastal hazards;
- (b) avoid redevelopment, or change in land use, that would increase the risk of adverse effects from coastal hazards;
- (c) encourage redevelopment, or change in land use, where that would reduce the risk of adverse effects from coastal hazards, including managed retreat by relocation or removal of existing structures or their abandonment in extreme circumstances, and designing for relocatability or recoverability from hazard events;
- (d) encourage the location of infrastructure away from areas of hazard risk where practicable;
- (e) discourage hard protection structures and promote the use of alternatives to them, including natural defences; and
- (f) consider the potential effects of tsunami and how to avoid or mitigate them.

### Policy 26 Natural defences against coastal hazards

- (1) Provide where appropriate for the protection, restoration or enhancement of natural defences that protect coastal land uses, or sites of significant biodiversity, cultural or historic heritage or geological value, from coastal hazards.

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<sup>8</sup> Risk: Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood of occurrence (AS/NZS ISO 31000:2009 *Risk management – Principles and guidelines*, November 2009).

- (2) Recognise that such natural defences include beaches, estuaries, wetlands, intertidal areas, coastal vegetation, dunes and barrier islands.

**Policy 27 Strategies for protecting significant existing development from coastal hazard risk**

- (1) In areas of significant existing development likely to be affected by coastal hazards, the range of options for reducing coastal hazard risk that should be assessed includes:
  - (a) promoting and identifying long-term sustainable risk reduction approaches including the relocation or removal of existing development or structures at risk;
  - (b) identifying the consequences of potential strategic options relative to the option of ‘do-nothing’;
  - (c) recognising that hard protection structures may be the only practical means to protect existing infrastructure of national or regional importance, to sustain the potential of built physical resources to meet the reasonably foreseeable needs of future generations;
  - (d) recognising and considering the environmental and social costs of permitting hard protection structures to protect private property; and
  - (e) identifying and planning for transition mechanisms and timeframes for moving to more sustainable approaches;
- (2) In evaluating options under (1):
  - (a) focus on approaches to risk management that reduce the need for hard protection structures and similar engineering interventions;
  - (b) take into account the nature of the coastal hazard risk and how it might change over at least a 100 year timeframe, including the expected effects of climate change; and
  - (c) evaluate the likely costs and benefits of any proposed coastal hazard risk reduction options.
- (3) Where hard protection structures are considered to be necessary, ensure that the form and location of any structures are designed to minimise adverse effects on the coastal environment.
- (4) Hard protection structures, where considered necessary to protect private assets, should not be located on public land if there is no significant public or environmental benefit in doing so.

## 6.4 Appendix 4: Relevant Policies from Horizons Regional Council Proposed One Plan (Regional Policy Statement)

### Policy 10-1: Responsibilities for natural hazard management

In accordance with s62(1)(i) RMA, local authority responsibilities for natural hazard management in the Region are as follows:

- (a) The Regional Council and Territorial Authorities must be jointly responsible for:
  - (i) raising public awareness of the risks of natural hazards through education, including information about what natural hazards exist in the Region, what people can do to minimise their own level of risk, and what help is available.
- (b) The Regional Council must be responsible for:
  - (i) developing objectives and policies for Region-wide management of activities for the purpose of avoiding or mitigating natural hazards,
  - (ii) developing specific objectives, policies and methods (including rules) for the control of:
    - (A) all *land* use activities in the *coastal marine area*,
    - (B) erosion protection works that cross or adjoin mean high water springs,
    - (C) all *land* use activities in the *beds of rivers and lakes*, for the purpose of avoiding or mitigating *natural hazards*, and
  - (iii) taking the lead role in collecting, analysing and storing regional natural hazard information and communicating this information to Territorial Authorities.
- (c) Territorial Authorities must be responsible for:
  - (i) developing objectives, policies and methods (including rules) for the control of the use of land to avoid or mitigate natural hazards in all areas and for all activities except those areas and activities described in (b)(ii) above, and
  - (ii) identifying floodways (as shown in Schedule I1) and other areas known to be inundated by a 0.5% annual exceedance probability (AEP) flood event on planning maps in district plans, and controlling land use activities in these areas in accordance with Policies 10-2 and 10-4.

### Policy 10-2: Development in areas prone to flooding

- (a) The Regional Council and Territorial Authorities must not allow the establishment of any new structure or activity, or any increase in the scale of any existing structure or activity, within a floodway mapped in Schedule I unless:
  - (i) there is a functional necessity to locate the structure or activity within such an area, and
  - (ii) the structure or activity is designed so that the adverse effects of a 0.5% annual exceedance probability (AEP) (1 in 200 year) flood event on it are avoided or mitigated, and
  - (iii) the structure or activity is designed so that adverse effects on the environment, including the functioning of the floodway, arising from the structure or activity during a flood event are avoided or mitigated, in which case the structure or activity may be allowed.
- (b) Outside of a floodway mapped in Schedule I the Regional Council and Territorial Authorities must not allow the establishment of any new structure or activity, or an increase in the scale of any existing structure or activity, within an area that is likely to be inundated in a 0.5% AEP (1 in 200 year) flood event unless:
  - (i) flood hazard avoidance is achieved or the 0.5% AEP (1 in 200 year) flood hazard is mitigated, or
  - (ii) the structure or activity is on production land, or

- (iii) there is a functional necessity to locate the structure or activity within such an area and the structure or activity complies with Policy 10-2(a)(ii) and (iii), in any of which cases the structure or activity may be allowed.
- (c) Flood hazard avoidance must be preferred to flood hazard mitigation.
- (d) When making decisions under Policies 10-2(a) to (c) regarding the appropriateness of any proposed flood hazard avoidance or mitigation measures, the Regional Council and Territorial Authorities must:
  - (i) ensure that in a 0.2% AEP (1 in 500 year) flood event the inundation of occupied structures and access from occupied structures must be no greater than 0.5 m above finished ground level with a maximum water velocity of 1.0 m/s, or some other combination of water depth and velocity that can be shown to result in no greater risk to human life, infrastructure or property,
  - (ii) ensure that any more than minor adverse effects on the effectiveness of existing flood hazard avoidance or mitigation measures, including works and structures<sup>^</sup> within River and Drainage Schemes, natural landforms that protect against inundation, and overland stormwater flow paths, are avoided,
  - (iii) ensure that adverse effects on existing structures and activities are avoided or mitigated,
  - (iv) have regard to the likelihood and consequences of the proposed flood hazard avoidance or mitigation measures failing,
  - (v) have regard to the consequential effects of meeting the requirements of (d)(i), including but not limited to landscape and natural character, urban design, and the displacement of floodwaters onto adjoining properties, and
  - (vi) have regard to the proposed ownership of, and responsibility for maintenance of, the flood hazard avoidance and mitigation measures including the appropriateness and certainty of the maintenance regime.
- (e) Within that part of the Palmerston North City Council district that is protected by the Lower Manawatu River Flood Control Scheme to a 0.2% AEP (1 in 500 year) standard, including the Mangaone Stream stopbank system, additional flood hazard avoidance or mitigation measures will generally not be required when establishing any new structure or activity or increasing the scale of any existing structure or activity.
- (f) This policy does not apply to new critical infrastructure.

**Policy 10-4: New critical infrastructure**

The placement of new critical infrastructure in an area likely to be inundated by a 0.5% AEP (1 in 200 year) flood event (including floodways mapped in Schedule I), or in an area likely to be adversely affected by another type of natural hazard, must be avoided, unless there is satisfactory evidence to show that the critical infrastructure:

- (a) will not be adversely affected by floodwaters or another type of natural hazard,
- (b) will not cause any adverse effects on the environment in the event of a flood or another type of natural hazard,
- (c) is unlikely to cause a significant increase in the scale or intensity of natural hazard events, and
- (d) cannot reasonably be located in an alternative location.

**Policy 10-5: Other types of natural hazards**

The Regional Council and Territorial Authorities must manage future development and activities in areas susceptible to natural hazard events (excluding flooding) in a manner which:

- (a) ensures that any increase in risk to human life, property or infrastructure from natural hazard events is avoided where practicable, or mitigated where the risk cannot be practicably avoided,

- (b) is unlikely to reduce the effectiveness of existing works, structures, natural landforms or other measures which serve to mitigate the effects of natural hazard events, and
- (c) is unlikely to cause a significant increase in the scale or intensity of natural hazard events.

**Policy 10-6: Climate change**

The Regional Council and Territorial Authorities must take a precautionary approach when assessing the effects of climate change and sea level rise on the scale and frequency of natural hazards with regard to decisions on:

- (a) stormwater discharges and effluent disposal,
- (b) coastal development and coastal land use,
- (c) activities adjacent to rivers,
- (d) water allocation and water takes,
- (e) activities in a Hill Country Erosion Management Area,
- (f) flood mitigation activities, and
- (g) managing storm surge.

## 6.5 Appendix 5: Earthquake Zones Map from NZS 4229:1999

NZS 4229:1999

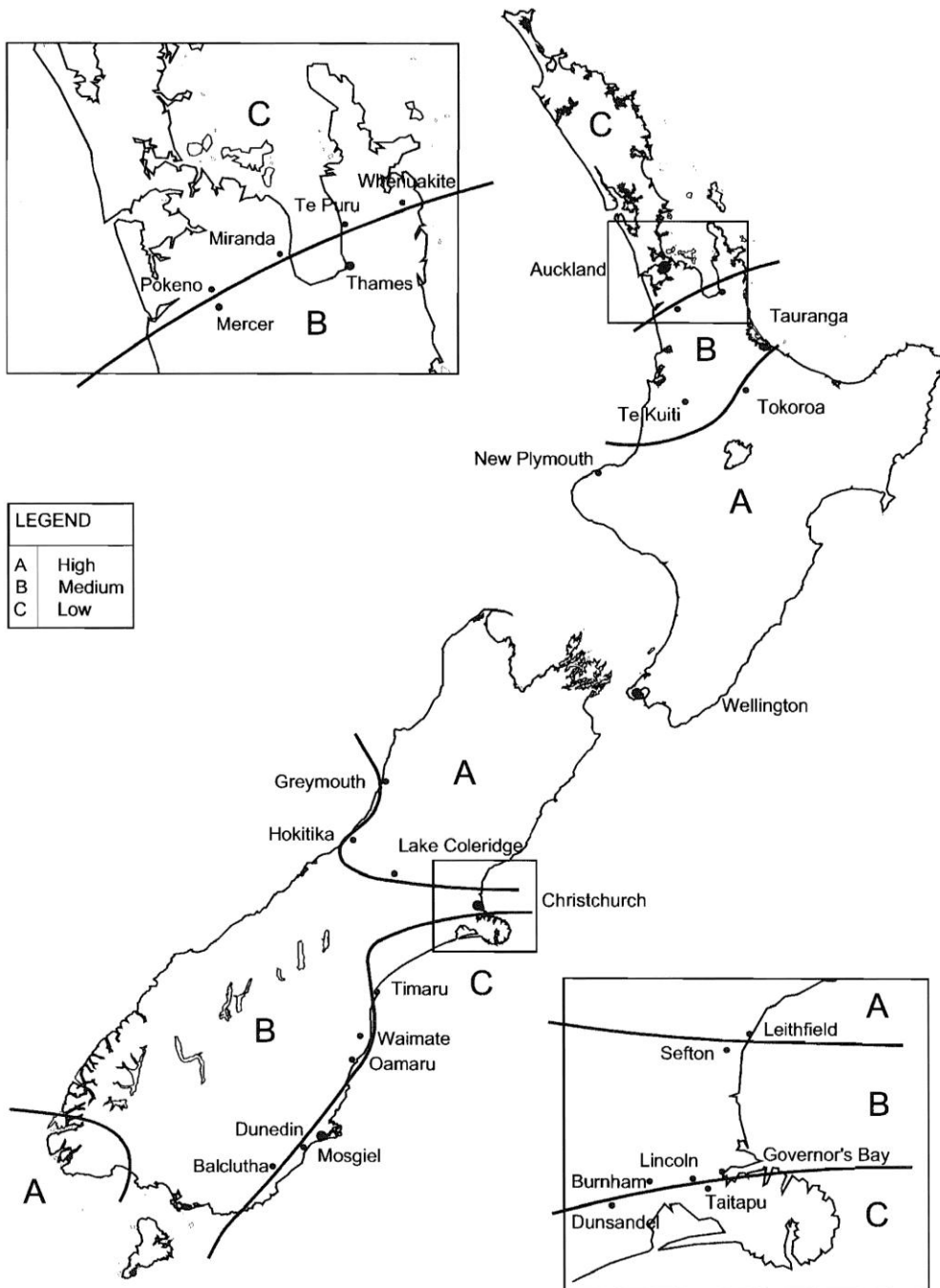
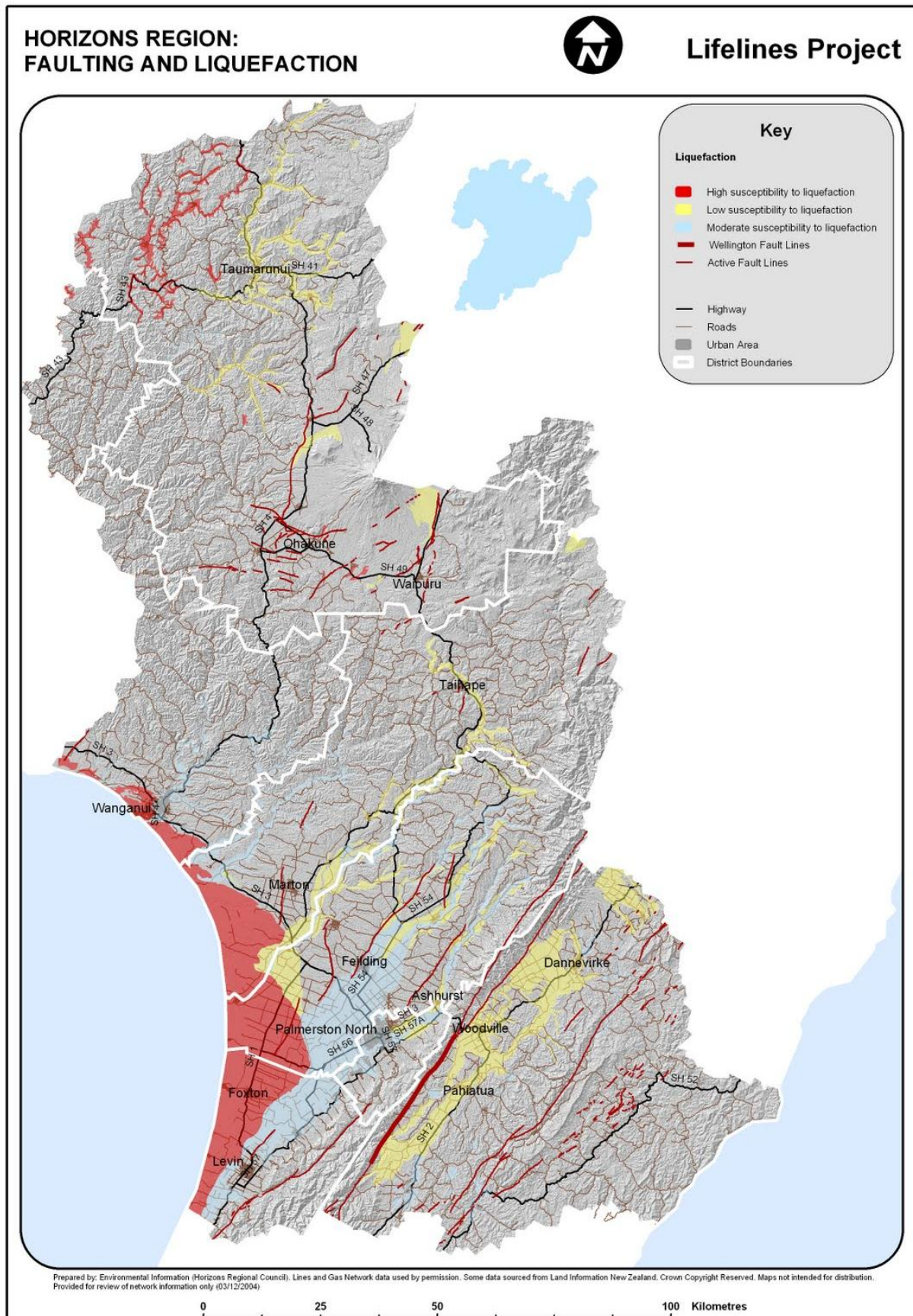


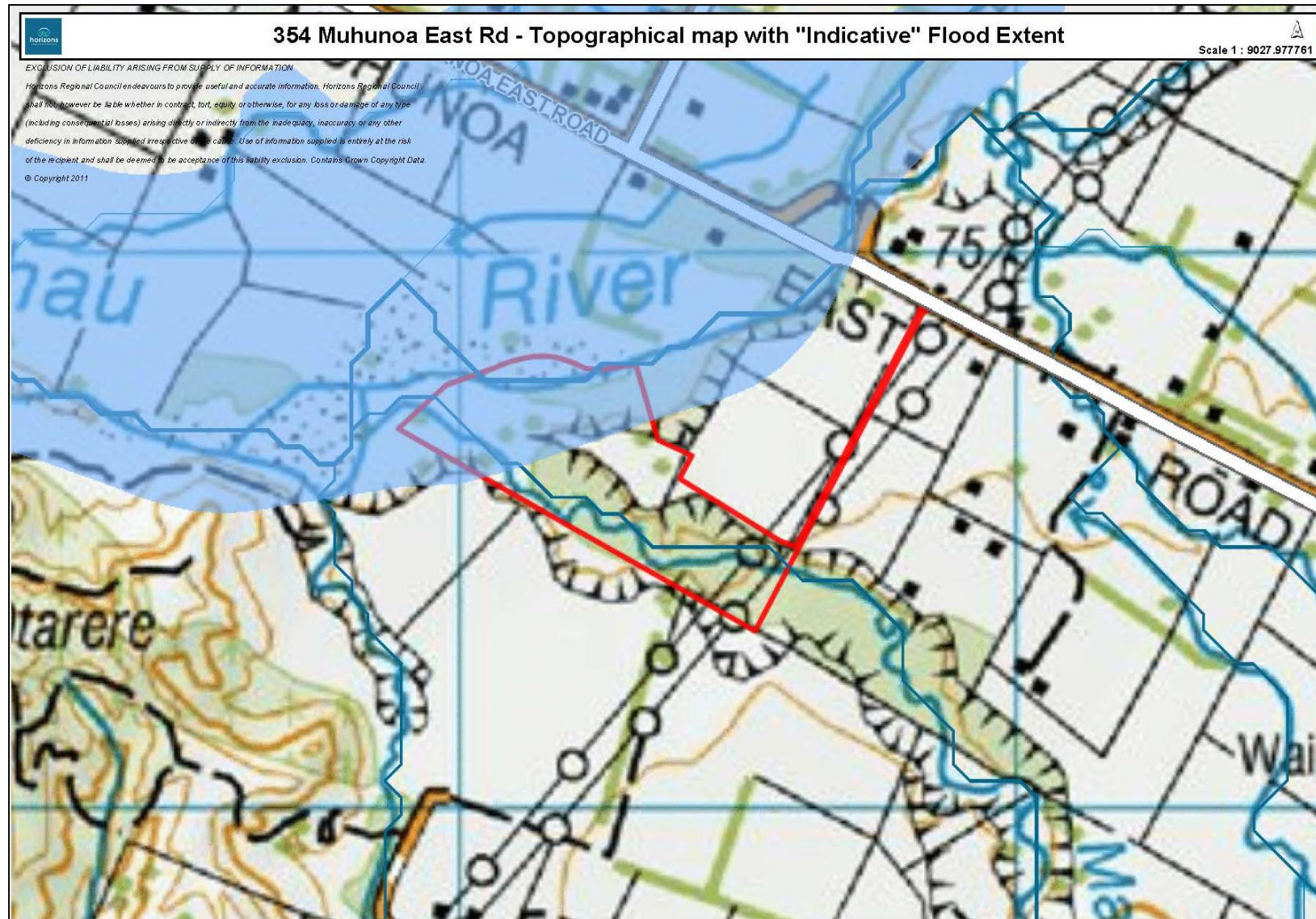
Figure 4.1 – Earthquake zones (see 4.2.1)

## 6.6 Appendix 6: Faulting and Liquefaction Map from Manawatu-Wanganui Region Lifelines Report

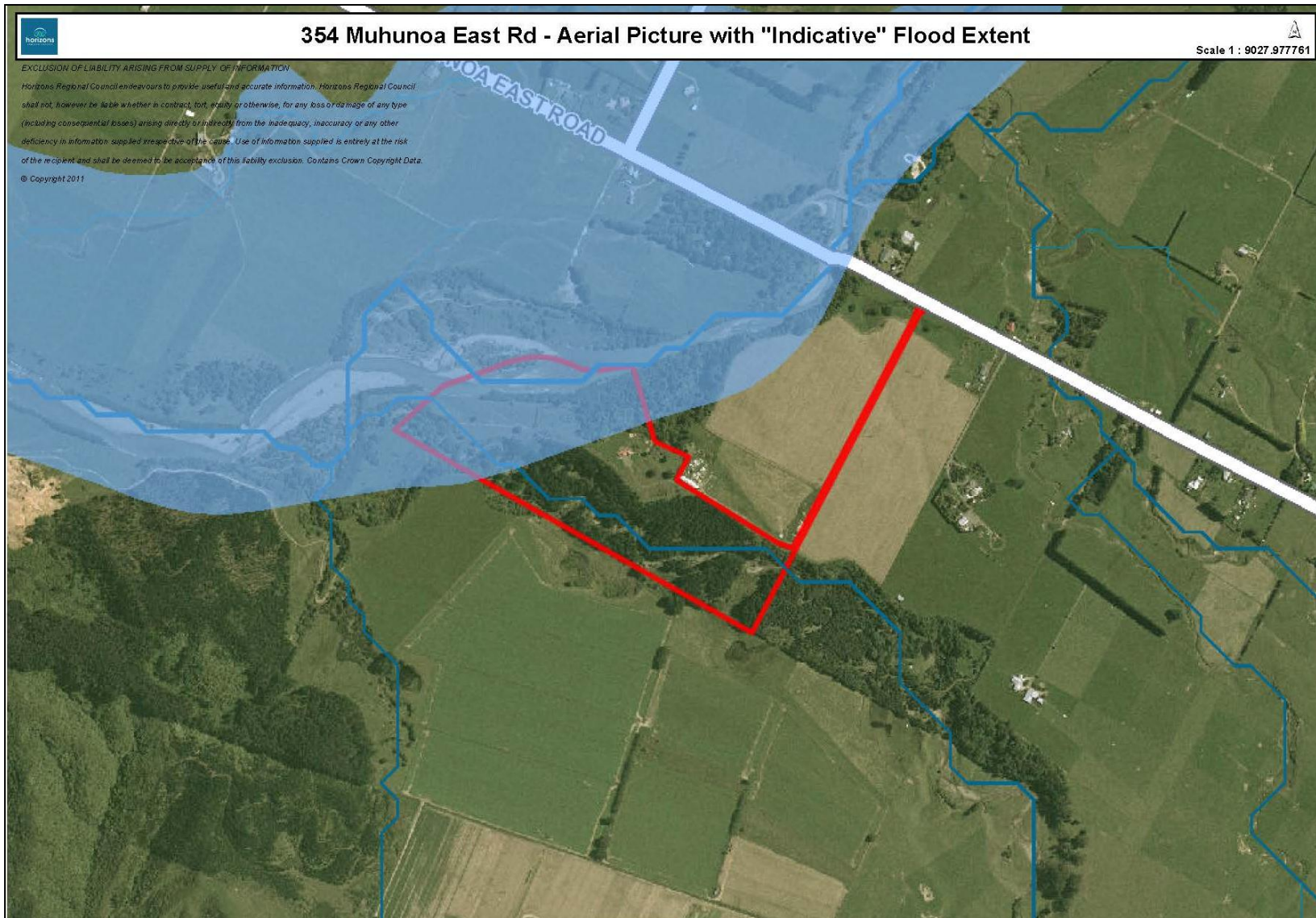




## 6.7 Appendix 7: 354 Muhunoa East Road – Flood Hazard Overlay Area

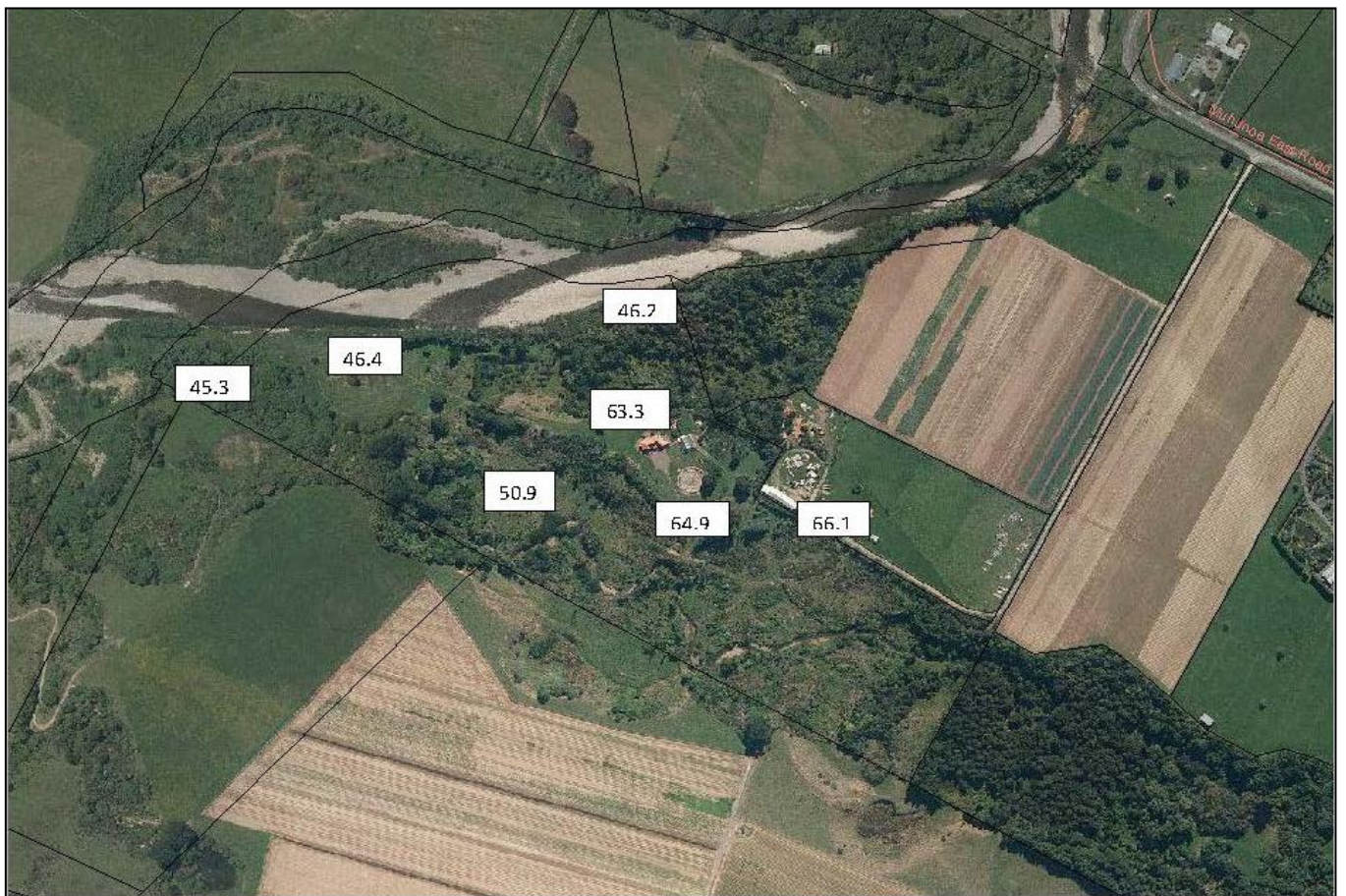
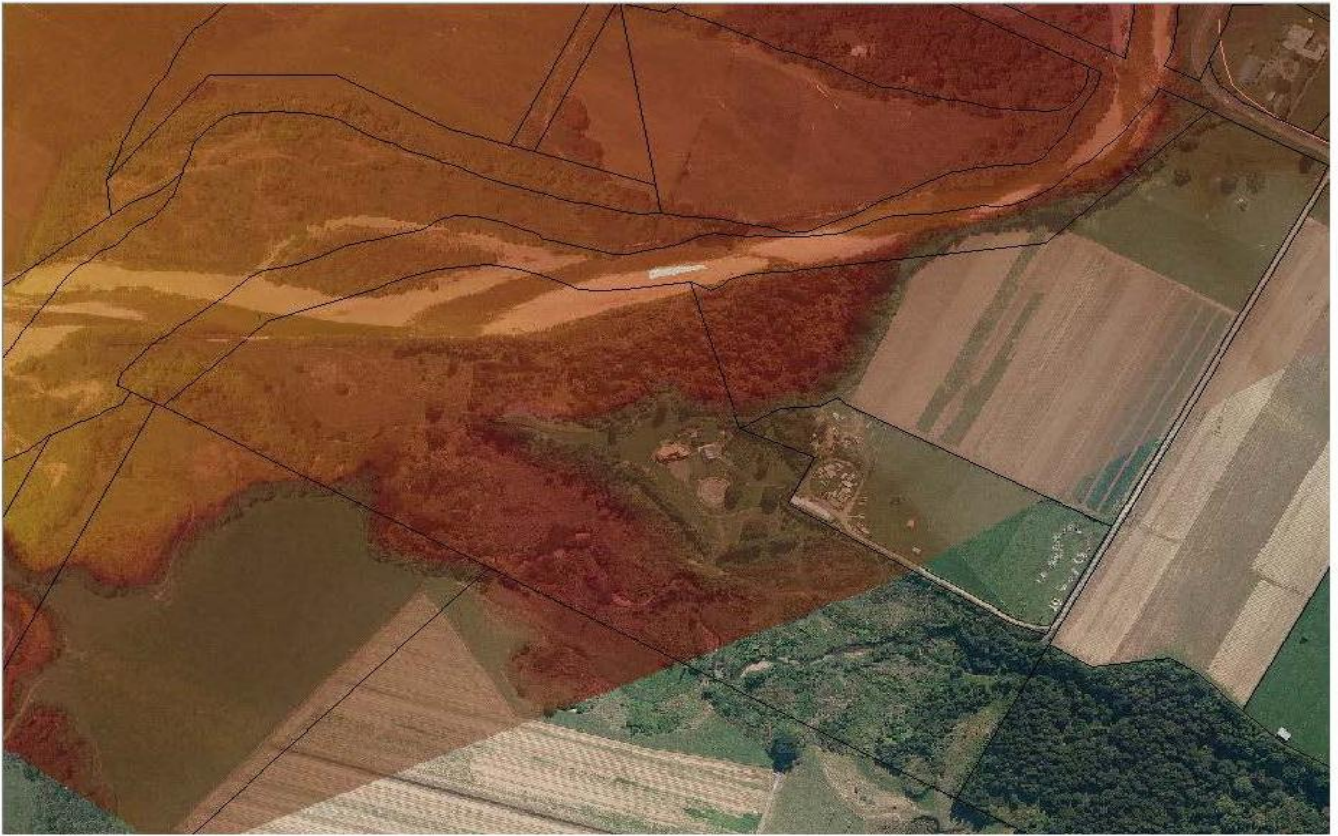








345 MUHUNOA EAST ROAD – LIDAR SURVEY IMAGERY & LEVELS IN TERMS OF WELLINGTON DATUM









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